The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 88, NO. 21 · CHICAGO, ILLINOIS MAY 21, 1927

MEDICINE: ITS ACCOMPLISHMENTS AND ITS NEEDS*

JABEZ N. JACKSON, M.D.
KANSAS CITY, MO.

It is a great privilege to have lived in the present generation. Within its span more has been added to the sum of human knowledge than in any previous period of the world's history. The Golden Age it has been called—the Age of Science. Discovery after discovery has followed in such rapid sequence that the mind of ordinary man is awed with amazement. Fundamental principles of science, slowly comprehended through long periods of time past, have suddenly found practical application beyond even the vision of the dreamer. Through them man has been given mastery in a measure over land and sea and sky. The application of power to motion has revolutionized transportation and conquered space. By wire, by cable, by radio, through the air practically instantaneous communication around the world has been made possible. News and knowledge are thus promptly interchanged and the advances of one become the heritage of all. Machine power has lifted much of the burden from the human back and multiplied infinitely the possibilities of production. Cooperation has replaced segregation. Progress has been the watchword.

In the fields of medicine the workings of science have been none the less remarkable, though less obvious to the general eye. When the microscope first enabled us to comprehend the fundamental cellular structure of the body, the key to the ultimate interpretation of life was put in our hands. When Pasteur discovered the existence of other cellular organisms capable of attack on human cells, he gave to our science its first knowledge of the essential cause and nature of much of disease, and the new science of bacteriology was born. Through it pathology found a new interpretation and became a vital study. The culture tube and the reagent brought chemistry into the field, and through the three the laboratory became the center of medical investigation.

Brief though the span since the birth of these sciences, their contributions to human welfare have been numerous and of value inestimable. The knowledge of how to prevent many diseases has alone saved to the world countless lives and immeasurable expense. Cholera, which once with its death scythe staiked through nations, has become now but a name. Yellow fever, which almost annually gleaned its thousands of human lives and paralyzed commercial activity, has been driven to the far recesses of Africa, where the few cases reported in the past year evidence its dying gasps. The sanitary control of malaria and other infectious fevers made effective by Gorgas built the Panama Canal and rerouted the commerce of the world. Can one find figures in dollars and cents to estimate the commercial value alone of such contributions of preventive medicine? And these are only a few illustrations from this field.

Can one measure the numbers and the values of the lives of the many youngsters snatched from the jaws of diphtheria by the use of antitoxin, to say nothing of the anguish of apprehension and grief lifted from the hearts of parents? Typhoid alone forty years ago kept medical men supplied with a lucrative annual income, and its ravages in time of war frequently accounted for more lives than did bullets. Today through modern sanitation and with preventive inoculations, its existence has become a disgrace to the community and in an army almost a crime.

May these illustrations, few though they be, stand as a test to the efficiency of the "Great Medical Trust"—the only trust that ever existed to save billions of dollars and millions of lives and countless sorrow to mankind at the expense of its own sources of income.

CONTRIBUTIONS OF MEDICAL AND SURGICAL SCIENCE

The curative contributions of medical and surgical science have been no less notable, though obviously less noted. No one can estimate how many annually paid the toll of death in days gone by to what we may here call, in general, surgical diseases. With the almost inevitable infection and ofttimes death from wounds and surgical efforts, much of the body remained terra incognita until the postmortem table was reached. The immortal work begun by Lister in carrying the observations of Pasteur into the surgical field provided a revolution more significant than a revolution of arms—the one bringing peace and life, the other pain and death. The impunity with which the physical body could now be invaded enabled the bold surgeon to explore hidden disease and to bring to light the knowledge of their beginnings at a time when they might be amenable to cure; and from these early explorations an interpretation of hitherto unknown signs.

It seems almost strange in this day to recount that it was only in the eighties of 1800 that appendicitis was recognized as a definite entity and its sequences understood. Even as late as 1893 I heard a supposedly learned man say, "I have practiced medicine forty years and have never seen a case of appendicitis." And

* President's address before the American Medical Association at the Seventy-Eighth Annual Session, Washington, D. C., May 17, 1927.

what is said of appendicitis is true of numerous diseases of other organs in which modern surgery has not alone offered relief from the disease but has equally contributed to the knowledge of earlier symptoms and of pathologic sequences. Surgery has thus been of great aid to general medicine, as well in clarifying progressive diagnosis and in making pathology a living science instead of alone a deadhouse investigation. Likewise the possibility of safe and painless experimental surgery in the lower animal has been of great value. It has enabled us to test out and perfect surgical technic on the dog instead of at the expense of human life. It has as well given new life to the science of physiology through our ability actually to demonstrate processes in vivo. Many problems are thereby being solved today which heretofore were inexplicable, and, as Morris says, "a new age, the Age of Physiology, has been born." And to it perhaps we may say the future looks with its greatest expectations.

Finally, it would be remiss not to mention the contribution by science in this generation of another notable aid both to diagnosis and to therapy—the roentgen ray. Through it we have been enabled to visualize conditions which the eye alone could never see and thus to make diagnoses hitherto impossible. So important are its contributions that the roentgen-ray laboratory has become as necessary to medical science as the laboratories of bacteriology, pathology, physiology and chemistry. Its therapeutic contributions have merely to be mentioned.

These fragmentary remarks will serve to recall the marvelous contribution of this wonderful generation and a vision of their practical benefits to the world. In this period fifteen years has been added to the span of human life; lives have been saved, suffering relieved, derelicts and crippled restored to productive and happy existence; pestilences mastered, commerce saved, civilization recast—surely a record entitling medical science to a vast credit balance.

NEW STANDARD OF SERVICE, BASED ON PROGRESS OF SCIENCE

And now we turn to face the future. With the inspiration of such a heritage we can but face it with roseate expectations. And yet it will probably be a different age, probably less romantic. The age of the pioneer is always one of thrills. Facing uncharted fields with uncharted paths, each day is a new day and its future in "the laps of the gods." We read with bated breath the lives of the pioneers of history and memorialize them in story and in song, the heroes of hardship and of triumph. But let us remember that the builder is equal to the hewer, the organizer more important finally than the discoverer. The paths of progress have been fairly well blazed, but progress must be ever onward. The doctor of today faces the future as quite a different man from the one who entered medicine a generation ago. Then his equipment was rather a meager education with little absolute knowledge. His resources were his own faculties of deduction from the observation of his own senses. Today he is an educated man to begin with, inheriting the knowledge of the past and aided by all the resources that science can add. Much will be expected of him, much of cooperation will be required. The laboratory and the hospital must be at his command, for the people of today have been educated to a new standard of service.

SHORTAGE OF PHYSICIANS IN RURAL COMMUNITIES

We hear much discussion today of the lack of general practitioners and particularly of the shortage of physicians in rural communities. But could we expect otherwise? A generation ago the physician of even a small community could make a respectable living annually in the treatment of a few diseases. Typhoid, malaria and the summer dysenteries alone kept one pretty busy through a considerable part of a year, and his horse and buggy for transportation with his own limited senses for diagnosis and a saddle bag of medicines for treatment were his complete equipment. Often he guessed—and guessed well for his training—and nothing more was expected. Now he must be equipped with at least the essentials of a laboratory; must cover a larger territory, in an automobile; must have the aid of a nurse in severe illness; and finally must refer a large and perhaps the most valuable part of his business to a specialist better equipped or to a hospital where facilities are at hand. Is it surprising that the modern man trained to modern ideas looks elsewhere? The community of the future that expects modern medical service must expect to furnish the essential necessities for such services. The laboratory, the hospital and the opportunity for cooperation become henceforth the prime problems of medical practice. These requisites are offered in larger centers—though even here not entirely adequately. And in some more progressive communities the need is being foreseen. County or local hospitals are becoming more numerous year by year. But they must become practically universal. It is true they present possibilities for much criticism; but, after all, they are essential, and time alone can remedy the causes of criticism.

NEED OF ENDOWED HOSPITALS

Now modern hospitals with laboratories and trained assistance cost money. Likewise, unfortunately, as the demands of science increase and the expense of everything connected with the hospital increases in measure, the problem becomes a big one. There was a time when perhaps a hospital might be built as a productive investment and thus elicit interest. Forty years ago an endowment of $5,000 was adequate to provide for the support of one bed of hospital service constantly occupied for a year—$300 a year. The hospitals of that period were of cheap construction and with little equipment. Expensive construction and expensive equipment, laboratories and roentgen-ray apparatus, machinery for electrotherapeutics and hydrotherapy, trained nurses and salaried chiefs of departments—these products of progress have changed the picture. Today the cost of care of a patient in a city hospital ranges from $4 to $8 a day. This does not include the expense of special nursing or other services of like nature. It does not consider the doctor's service at all. It may be admitted that in many individual cases much of the diagnostic and laboratory expense is not essential. The people, however, have been educated to expect it and to demand it. Yet as a rule they are amazed at what they usually consider an exorbitant hospital bill. Facts, however, are inexorable things. And it must be recognized as an inescapable fact that the actual expense of hospital service is such that few hospitals today can make both ends meet without outside aid.

Likewise it must be recognized that the provision of a hospital is not a personal gift to the medical profession. In a pecuniary way the medical profession profits in no wise from the existence of a hospital. It is curious how people often think otherwise and apparently believe that when they build a hospital they are making a generous gift to the physicians of the community. The hospital is no more a personal contribution to the physician than is the court house a gift to the legal profession. Court houses are built in order that personal and property rights of men may be protected by proper legal processes. Is it not equally worth while to provide facilities for the protection of the health and lives of men? The court house is an old institution and the necessity of its provision by public funds has long been recognized. The hospital is the outgrowth largely of a new and scientific medicine. Its necessity and its importance to the community must likewise become generally recognized. If proper character of medical service is required in any community, adequate facilities must be offered to attract proper medical talent to a place where it can render the service to which it has been educated. In this way and in this way alone can rural counties solve the problem of their adequate medical service. Obviously, however, the heavy expense mentioned will not apply to smaller county hospitals. The figures cited were city figures.

The hospital and health problems are scarcely less acute in the centers of population. Here the best is expected and demanded, and the expense accordingly advances. In most cities the responsibility to the poor is fairly well recognized, and municipal or city hospitals are generally provided. And in such institutions let it be noted that the best of medical talent is always readily available, and always without compensation. In fact, it may be stated broadly that there is scarcely a medical charity in existence today that could continue to exist for twenty-four hours except for the gladly given and free service of medical men.

A city pays its counselors and legal talent, usually well. It pays its butcher and milkman, and its service of every other character. And it pays at full prices and sometimes, under political control, at more than full price. Is it therefore asking a favor when medical men serving gladly and without remuneration ask simply for such support in facilities as may enable them to give the best that is in them?

Still more acute than the problem of the city hospital for the poor which the city supports is the problem of the private or semiprivate hospital. Here the expense is easily met by the rich man. But what of the situation of that large and worthy class, sometimes called the middleman, ofttimes the finest of God's creatures? A young man of splendid character has completed an expensive education to make him a worthy citizen for a life of valuable service. He has married a fine young woman: maybe my daughter, maybe yours. Perhaps they have been blessed with a splendid child, or possibly two. This young man may some day be a millionaire. Today as an apprentice he receives only a modest salary. With it through much prudent thought and ofttimes denial they are starting a happy and promising family and home. When the necessary monthly bills are paid, however, the bank balance shows little or nothing. The wife is stricken with an attack of acute appendicitis and operation is required. Her case is a serious one and the services of a skilled nurse are required—in this day of "labor hours" in nursing, possibly two, maybe three, each at $8 a day. She recovers and he is happy. But when he calls at the office for his bill and then consults his bank balance he finds he is left hopelessly in debt for a long time to come. He would not accept charity branded as such. He is a man. This circumstance is not due to overcharge on the part of the hospital. It is not due to the expense of medical service. His surgeon waits—gladly and without pressing. He may decline to present a bill at all. It is no criticism of any one. But the problem is there.

There is but one answer. Years ago was propounded the question, "Am I my brother's keeper?" How will it be answered? Hospitals of such class must not only be built by men: they must as well be endowed. It has been considered most generously charitable to build a fine hospital and give it to the church or to the community or to an independent board of trustees. It cannot be made self supporting. A load of responsibility has been placed on some one's shoulders. It can be met only by further contribution from the same or other sources. Perhaps if an absolutely charity hospital, it will be endowed. But what the public must learn is that for the protection of the middleman endowment is also a necessity—endowment that will at least provide for the expense of purely scientific service, a service which in itself has no direct return; endowment that will equip adequate modern laboratories such as proper service demands; endowment that will provide at least modest compensation for the purely scientific laboratory expert who has no other source of remuneration and yet whose aid is a necessity to all who practice; endowment that will meet the expense which the "Generation of Science" has brought to medical service. Men of wealth have contributed most generously to the endowment of institutions for research, and we bow in acknowledgment of such wonderful contributions for the future good of mankind. The appeal of charity has likewise touched the heart and reached the pocket of men for contributions to absolute charity. And for such we give praise. But is there not possibly a higher service still: a service which unseen and unnamed is rendered to the man who is a man, though neither rich nor pauper—the fellow who builds a world, generous to rich and to pauper alike?

Argyle Building.

Collapse Therapy for Tuberculosis. — The considerable advances which it has been our generation's privilege to witness in the treatment of tuberculosis are due solely to one cause; namely, the rapid and universal development of that purely mechanical method which we call collapse therapy. Artificial pneumothorax, the early history of which dates back to more than a century ago, is based on the soundest anatomical and physiopathological principles. The reason it took such a long time before it was considered seriously is easy to explain. Two conditions . . . were indispensable to its being made a safe and controllable procedure: first, the advent of aseptic surgery, which put an end to the previously almost unavoidable risk of severe infection attending the simple puncture of the pleural cavity; and, second, the discovery of the x-ray, which enabled us to explore the inside of the chest and to observe the pathological changes in the lung with unprecedented clearness and accuracy. . . . That artificial pneumothorax is the greatest—I feel almost tempted to say, the only—recent advance made in the therapy of pulmonary tuberculosis, who can seriously doubt today?—Rist, Edouard: Recent Advances in the Treatment of Pulmonary Tuberculosis, *Am. Rev. Tuberc.*, March, 1927.

TRACHOMA AMONG THE INDIANS OF THE SOUTHWEST *

WILLIAM CAMPBELL POSEY, M.D.
PHILADELPHIA

Two years ago the Secretary of the Interior, Dr. Hubert Work, requested the American Medical Association to appoint a committee of ophthalmologists from the Association with whom he might confer as occasion demanded on the spread of trachoma among the Indians.

The trustees accordingly appointed Drs. Wilder of Chicago, Knapp of New York and me to serve on such a committee, Dr. Proctor of Boston being added to our number later on account of his familiarity with the Indian problem in the Southwest.

Last summer Dr. Wilder, the chairman of the committee, with Dr. Holloway of Philadelphia and others, visited some of the reservations in Oklahoma, and last autumn, in order to be in a better position to advise the secretary by making a personal survey and study of the situation at close range, Dr. Proctor and I visited the Southwest and inspected the most important Indian schools and hospitals in that region. We found trachoma among the Indians everywhere, children as well as adults exhibiting all stages of the disease, which differed in no way from the manifestations observed elsewhere. The youngest subject we saw was a 3 months old child, with numerous characteristic granules studding the conjunctiva of both upper and lower lids.

Some years ago the government made the education of Indian children obligatory and, when attendance at some nearby day school was impossible, enforced the rule requiring residence in one of its boarding schools. There are many such throughout the Indian territory; we visited only three—that at Albuquerque, N. M., Fort Defiance, Ariz., and Riverside, Calif. The Albuquerque school accommodates 830 boys and girls, the one at Fort Defiance is somewhat smaller, while the school at Riverside has almost 1,000 pupils. All three of these institutions are housed in large buildings provided with spacious playgrounds. The dormitories are roomy and airy, and each pupil has a separate bed on which the linen is clean. The children wash under running water and dry their hands and faces on small individual towels. The pupils appear well nourished, active and happy. Many had trachoma, and from our investigations it was apparent that, notwithstanding the sanitation of the schools, the disease is propagated there and that some pupils who enter in the autumn with unaffected eyes return to their homes in the summer with trachoma.

In attendance at each of these schools is a resident physician of the Indian Service who is more or less familiar with diseases of the eye, but with insufficient time and inadequate nursing at his command to give proper care in the trachoma cases under his supervision. No doubt owing to the increased knowledge of the disease acquired as a consequence of the campaign which the government has been carrying on against trachoma in recent years, we found all the physicians of the Indian Service with whom we came in contact able to recognize and properly treat the disease. No cases of mistaken diagnosis were observed; none of follicular or vernal conjunctivitis mistaken for the more serious affection of the conjunctiva.

Connected with each of the schools is a small hospital where sick children are cared for. In recent years the government has detailed three officers of the Indian Medical Corps to travel over the Southwest and treat trachoma cases only, and has established a small trachoma hospital in Albuquerque. It is doubtful how much good is accomplished by this "clean-up" kind of treatment, most of the cases so handled being children who demand more than one application of a surgeon's knife or scarifier before they can be pronounced cured. The comparatively few adults treated, most of whom have distorted cartilages, are in all probability benefited.

As is well recognized, trachoma is common among the adult members of the various tribes; 25 per cent, or perhaps more, of the Navajo and Pueblo tribes are said to have the disease, mostly in its cicatricial stages, though we observed all other types.

Among the villages we visited were Santa Clara, near Santa Fe, famous for its black pottery; Laguna, with its well conducted, though small, hospital and sanatorium for tuberculous subjects, and the far famed sky city of Acoma. We investigated the conditions of living in these localities and found them to be very conducive to the spread of disease. The majority live in hogans, or cabins, which are badly ventilated and do not offer hygienic facilities. Many members of the tribes are shepherds and when caring for their flocks are exposed to the extremes of cold and heat in winter and summer, and to the irritating dust of the desert, and have scant facilities for bathing or cleanliness. These tribesmen live as close to nature as is possible in a beautiful but ill favored region to support human life. I am speaking particularly of the 35,000 or more members of the Navajo tribe in whose reservation we spent most of our time.

On our return to Washington we conferred with the authorities and, in our advisory capacity, recommended to the Secretary of the Interior that trachomatous children in the schools be separated from those unaffected by the disease, and that their eyes be given continuous treatment until they can be pronounced cured and no longer capable of infecting the eyes of others.

We suggested that this might be best accomplished by the creation of hospital schools, somewhat after the plan of those in operation in London which were founded by the school boards there about twenty-five years ago.

To save expense we suggested that the department might convert one of the existing schools into such an institution, children with involved eyes taking the place of those free from the disease, who should be removed to other schools. Children with the disease should be detained in such an institution for years under constant medical supervision and treatment, receiving such education and manual training as their ocular condition permits. Children not having the disease will thus be able to pursue their studies without danger of infection from their schoolmates.

It is my opinion that the compulsory education program for children, admirable and necessary as it is, has been the chief cause of the increase of trachoma among the Indians in recent years. It has been the bringing together in close contact in the schools of children with the disease who under the old system of tribal life led a more or less isolated existence and consequently were less likely to give the disease to others.

The extermination of trachoma among the adult Indians, particularly those of the nomadic tribes, presents a very difficult problem. Added to the conditions

* Read before the Section on Ophthalmology of the College of Physicians of Philadelphia, March 17, 1927.

of life, which are all unfavorable, is the problem of the "medicine man" and the religion of the Indians; the "medicine man" being regarded by them as not only a physical healer but a spiritual priest as well. If the Indian rejects his advice and spurns his medicine, he is endangering the future of his "spirit" and subjects himself to the opprobrium of his tribe.

It is hard to realize how exceedingly primitive many of these older Indians are in manner of living, and that few speak other than the Indian language. It will need the impress derived from the education of several generations of children before the adult Indian will be ready to receive and adopt the standards of living of the white citizens who surround him. In the meantime much can be done to supplement the training which their children are receiving by educational efforts directed to the adults themselves. This is difficult when dealing with nomadic tribes unfamiliar with our language, and can best be done, I am told, by the establishment of community centers, similar to those the government has already instituted in some places at trading posts and schools, which inviting conditions may beguile the older Indians to visit and there receive instruction through the medium of moving pictures and talks in their own language about better modes of life. Indian girls who have been trained as nurses, or other graduates of the schools who may show an aptitude for such service and who may impart to their elders some of the knowledge they have acquired in the schools, should be chosen.

More efficacious than traveling ophthalmologists and so-called clean-up campaigns would be the establishment of a number of hospitals for the treatment of eye diseases. These should be easy of access and should have ample provision for indoor treatment. There is a lack of hospital facilities in the Indian Service not only for treating diseases of the eye but also for general medical and surgical work. A first-class general hospital with modern laboratory and roentgen-ray equipment is badly needed in the Indian Service of the Southwest.

The cooperation of state health officers and of all organizations interested in the welfare of the Indian will be necessary to win the adult Indian to more hygienic ways of life. Incidentally, as the Indian rises to the white man's level in this respect, the government and all other agencies interested in Indian welfare will need to exercise increased vigilance to protect the neophyte from some of the evils of white companionship. "Fire water" is still as deleterious to the Indian as ever, and I am told that nearly all the arrests which are made in Indian reservations are for crimes instigated by drinking. The day will come, however, when the Indians, so far as manner of living is concerned, will be indistinguishable from the white people. Not until then, in my opinion, will trachoma cease to trouble them, for trachoma is a disease that flourishes only under adverse conditions of living; remove these and the spread of the disease will soon be controlled.

A final word as to local treatment. With one exception, all the physicians of the Indian Service with whom we came in contact are following a conservative plan of treatment, conserving the conjunctiva in the early stages, avoiding the mutilation of the mucous membrane, as advocated by Abadie and Darier, and getting rid of the trachomatous elements by expression and mild grattage, followed by applications of silver and copper. In the later stages when contracted cartilages irritate and cilia become inverted, tarsectomy is practiced. We saw some evil results of tarsectomy, such as retracted lids and undue scarring of the conjunctiva, and we heard of one case in which loss of both eyes followed the operation, no doubt from infection, the result of improper care during the operation or later.

Our committee is much gratified to learn of the recent establishment by the government of a trachoma hospital school at Fort Defiance, Ariz. This we believe is the most important step the government has thus far taken toward eradicating the disease. Should this school prove successful, others will without doubt follow throughout the Indian region. The government should receive the hearty commendation of the profession on the step it has taken, for there were obstacles in the way—natural prejudice on the part of Indian parents on being separated from their children, and other technical difficulties known only to the department. Dr. Richards, the medical officer in the Indian Service who will have charge of the school, has been long in the service and is thoroughly conversant with trachoma; he is conservative, an able administrator, and has the confidence of every one. There has long been a boarding school for Indians at Fort Defiance, on the site of the old fort which gave its name to the place, located some thirty miles north of Gallup, in Arizona, close to the New Mexico line. The spacious buildings are admirably situated at the foot of a beautiful canyon. Avenues of cottonwoods, set out by a provident early superintendent, give shade in a region otherwise bereft of trees. The present superintendent is able and popular, the whole institution being conducted in a manner that augurs well for the success of this very important undertaking.

THE ROSE BENGAL TEST FOR LIVER FUNCTION *

FURTHER STUDIES

N. N. EPSTEIN, M.D.; G. D. DELPRAT, M.D.
AND
WILLIAM J. KERR, M.D.
SAN FRANCISCO

The value of rose bengal as a clinical test for the estimation of liver activity has been proved conclusively by preliminary experiments and observations.[1] Our purpose in this paper is to describe a simplification of the technic of the test, and to review briefly the types of liver injury which may be revealed by a test of this kind.

As has been described in our previous communications, rose bengal is a dye (di-iodo-tetra-chlor-fluorescein) of the triphenylmethane series, which is readily soluble in water or saline solution, and which is not toxic for the tissues of the human body. Although Norman and Schmidt[2] have shown that under the influence of direct sunlight the dye very readily hemolyzes red blood cells in vitro, this photodynamic effect does not seem to occur within the human body to an

* From the Departments of Medicine and Dermatology, University of California Medical School.

1. Delprat, G. D.: Studies on Liver Function: Rose Bengal Elimination from the Blood as Influenced by Liver Injury, Arch. Int. Med. **32**: 401-410 (Sept.) 1923. Delprat, G. D.; Epstein, N. N., and Kerr, W. J.: A New Liver Function Test: The Elimination of Rose Bengal When Injected into the Circulation of Human Subjects, ibid. **34**: 533-541 (Oct.) 1924. Kerr, W. J.; Delprat, G. D.; Epstein, N. N., and Dunievitz, Max: The Rose Bengal Test for Liver Function: Studies on the Rates of Elimination from the Circulation in Man, J. A. M. A. **85**: 942-946 (Sept. 26) 1925. Epstein, N. N., and Rauschkolb, J. E.: The Rose Bengal Test for Liver Function, with Particular Reference to Its Use in the Therapy of Syphilis, Arch. Dermat. & Syph. **14**: 122-135 (Aug.) 1926.

2. Schmidt, C. L. A., and Norman, G. F.: Protection Afforded to Red Cells Against Hemolysis by Eosin, J. Infect. Dis. **27**: 40 (July) 1920; Further Studies on Eosin Hemolysis, J. General Physiol. **6**: 681 (July) 1922.

appreciable extent. Furthermore, it has been our practice to keep tubes of blood which contain some dye in a darkened container until the cells have been separated from the dye containing plasma by the centrifuge.

It has been shown in our preliminary experimental work that rose bengal, after injection into the circulating blood, is eliminated almost entirely through the liver parenchyma, appearing rapidly in the bile, from which it may be recovered and identified. Although the dye disappears rapidly from the blood stream in the normal experimental animal (in from eight to twelve minutes in the dog), it continues to appear in the bile for several hours after the intravenous injection. The same conditions have been found by Rowntree to occur following the injection of phenoltetrachlorphthalein. On the other hand, the disappearance of the dye from the blood stream is very definitely delayed by a diffuse liver injury, such as that produced by chloroform, phosphorus or other chemical poisons. The delay also occurs with occlusion of the common bile duct, which produces an obstructive jaundice. From the work of Counseller and McIndoe,[3] it is possible that this delay is also due directly to necrosis of liver cells which, as these authors have shown, follows complete obstruction of the bile ducts. The rapid disappearance of the dye from the blood, following its injection into the circulation under normal conditions and its retention under abnormal conditions, is the basis of the test under discussion.

It was necessary first to establish the rate of disappearance of the dye from the circulation in normal individuals. The normal average thus obtained from about 300 cases, without demonstrable liver disease, shows that when 100 mg. of the dye is injected into the circulation, only from 42 to 52.5 per cent remains in circulation at the end of eight minutes. At the end of sixteen minutes, the amount of dye retained in the normal individual is between 23 and 26 per cent. In severe liver injury, as in an advanced cirrhosis or in complete obstruction, there may not be an appreciable change in the concentration of the dye in the blood throughout the entire sixteen minutes, while with less extensive liver injuries, corresponding percentages of retention may obtain.

It is well known that the functional reserve of the liver is very great, and it follows from this that slight changes in function or small alterations in structure within the liver cannot be recognized by any test of liver function that has yet been devised. But diffuse pathologic processes in the liver, such as cirrhosis, or extensive infectious processes within the liver, as well as cloudy swelling or parenchymatous degeneration due to processes without the liver, can be very readily detected, and the extent to which the liver cells have been harmed can be determined with considerable accuracy.

One of the objections to the test as originally described was the complexity of the mathematical calculations used to express the results of the test on a percentage function basis. With increased clinical application of the test, certain changes were found advisable, and the technic herein described has met the requirements of simplicity during the last two years.

TECHNIC

Injection.—A vein in the cubital fossa is selected, and 10 cc. of a 1 per cent solution of rose bengal in physiologic sodium chloride solution is injected, and the needle washed through slowly with from 5 to 10 cc. of salt solution, which is held ready in a fresh syringe. The needle is left in the vein, and at exactly two minutes after the injection of the dye a sample of blood (10 cc.) is withdrawn from the needle into a clean syringe and discharged into a centrifuge tube containing a few crystals of potassium oxalate. The tube is carefully inverted two or three times. The needle is again washed by slowly injecting from 5 to 10 cc. of the salt solution, which maneuver prevents the clotting of blood in the needle. At eight and sixteen minutes, respectively, from the time of injection, samples of blood are withdrawn and collected in an identical manner. The needle is then withdrawn from the vein in the arm. It is our practice to advise the patient that the appearance of the dye in the stools will impart to them a distinct red color, since the unexpected appearance of the red stools may cause considerable alarm.

As soon as possible after collection, the blood samples are centrifugalized at a speed of 2,000 revolutions per minute for thirty minutes.

We have found it convenient to use 10 cc. record syringes and number 16 gage record needles. Rough handling of the blood samples is apt to cause some hemolysis of the red cells and to interfere with the colorimetric readings.

Colorimetric Analysis.—Five cubic centimeters of the plasma of each of the samples is separately mixed with 10 cc. of physiologic sodium chloride solution. The diluted plasma of the two minute sample is placed in the wedge of the Hellige colorimeter. This is used as the standard against which the eight and sixteen minute diluted samples are read.

Since the two minute sample represents the highest concentration of the dye in any individual, following the injection of a fixed amount of the dye into the circulation, it may be regarded as 100 per cent retention, and the colorimetric readings obtained by comparing the eight minute and sixteen minute specimens with it represent direct percentages of dye retained. Before making colorimetric readings, it is necessary to standardize the Hellige colorimeter used and to correct for any inaccuracies present. The colorimeter is standardized by comparing one sample of plasma against itself; the reading should be 100.

The colorimetric readings thus obtained indicate the ratio between the first or control sample and the subsequent samples. This obviously indicates the speed with which the dye leaves the circulation.

While we have regarded the two minute sample as representing the highest concentration of the dye in an individual at any one time, it is probable that some of the dye is removed from the circulation before the collection of the two minute sample; but this is not of great practical importance if care is taken to withdraw the blood at exactly two minutes. Furthermore, we are not as much concerned with the actual quantity of dye in the circulation as with the ratio of the percentage of dye in circulation at two distinct intervals of time, which in reality is its rate of disappearance. For this reason it is not essential that the solution of dye injected be exactly a 1 per cent solution nor that the dose be exactly 10 cc. Although considerable latitude may be taken in regard to the amount of dye injected, it would be advisable to inject approximately 100 mg. in the average sized adult. The dose may be varied according to the size of the patient, for some endeavor should be made to keep the initial concentration of the dye approximately the same. We have varied the dosage from 3 cc. of a 1 per cent solution in children to 15 cc. in large adults.

3. Counseller and McIndoe, quoted by Walters, Waltman: Physiologic Considerations in the Treatment of Obstructive Jaundice, J. A. M. A. 87: 2153 (Dec. 25) 1926.

In normal individuals, the eight minute sample is usually 50 per cent, varying from 40 to 60 per cent, and the sixteen minute sample varying from 23 to 30 per cent. These percentages represent the amount of dye retained in the circulation.

The technic described differs quite markedly from our original technic and offers the advantages of simplicity and accuracy. We have abandoned the artificial standard, made up by adding a known quantity of dye to the normal plasma of each individual, and have substituted the two minute sample as the standard. In order to determine whether there would be any essential difference in the results obtained, sixty-five patients

TABLE 1.—*Comparison of Color Match with Old and New Methods*

New Method (Two Minute Sample as Standard)		Old Method (Artificial Standard)	
	Color Match		Color Match
2 minutes = 100%		2 minutes 62 = 100%	Excellent
8 minutes = 50%	Excellent	8 minutes 34 = 54%	Good
16 minutes = 27%	Excellent	16 minutes 13 = 21%	Fair

were studied and both methods were used for comparison. It was found that invariably the color matches with the new method were far superior to those when an artificial standard was used. This, of course, lends more accuracy to the results of the test. A protocol of an average case thus compared is given in table 1. In this patient (J. C.) with a diagnosis of chancroid, 10 cc. of the dye was injected, May 6, 1926.

The other essential changes in the technic have been the elimination of the four minute sample, which does not give information of value, and the prolongation of the duration of the test from eight minutes to sixteen minutes. This increased length of time of observation lends more accuracy to the test and has the advantage of giving more information when the eight minute reading is at the borderline between normal and abnormal, as for example, in a case of metastatic carcinoma of the liver, in which the results were as follows: Two minutes, 100 per cent; eight minutes, 64 per cent (borderline); sixteen minutes, 52 per cent (definitely abnormal).

The sixteen minute specimen may be obtained by leaving the needle in the vein the entire time or a fresh venipuncture can be made to obtain the sample.

CLINICAL APPLICATION

Our experience with the rose bengal test for liver function during the last four years includes its application in more than 500 patients, many of these having definite liver disease. It might be well to review briefly our observations up to the present time.

Normal persons absorb rose bengal through the liver from the blood stream very rapidly so that at the end of sixteen minutes only a trace remains in the blood plasma; that is, rarely more than 25 per cent of the amount injected.

In chronic cholecystitis the elimination is usually within normal limits, and the test is not an aid in the diagnosis of the condition.

In cases of obstructive jaundice, catarrhal jaundice and arsphenamine icterus, the delay in the elimination of the dye is always very definite, being greatest in obstructive jaundice. The test is a valuable aid in detecting these conditions and in following their clinical course. Before the jaundice begins to clear clinically, the improvement in liver activity can be demonstrated by its increased ability to eliminate rose bengal. Following operations for the relief of obstruction of the common duct, the liver function improves markedly. The test may be used as an aid in determining the patency of a cholecystoduodenostomy, as the dye can be readily identified in the duodenal contents. It has proved very valuable in following the course of an arsphenamine hepatitis.

In cirrhosis of the liver, the impairment of liver function is in direct relation to the amount of scarring in the liver and to the encroachment on the functional reserve of the liver. An advanced case of cirrhosis always shows a marked delay in the excretion of rose bengal.

The test is of particular value in the differential diagnosis when ascites is the outstanding symptom. In cardiac failure, in tuberculous peritonitis and in carcinomatosis of the peritoneum, little change from the normal liver function has been noted, while on the other hand, when cirrhosis of the liver is present, there is a very marked impairment of liver function.

In metastatic malignancy of the liver, the conditions are variable and seem to depend on the amount of liver tissue which can function. Discrete scattered metastatic nodules in the liver do not interfere with its ability to eliminate the dye, but diffuse replacement of the liver tissue by carcinoma very definitely causes a retention of the dye in the blood stream.

Chronic passive congestion of the liver does not seem to prevent the absorption of rose bengal, and the curves are within normal limits.

Observations in patients in the various stages of syphilis have proved interesting, especially in those with a very florid type of early generalized infection. In a small percentage of these a definite delay in the excretion

TABLE 2.—*Severe Infections Within the Liver*

Case	2 Minutes	8 Minutes	16 Minutes	Clinical Notes
102 L. H.	100%	80%	.....	White man, aged 32, acutely ill; high temperature; slight icterus; died a few hours after test; autopsy revealed very extensive pyophlebitis of the liver, with multiple liver abscesses
189 A. W.	100%	81%	.....	Black woman, aged 22, very septic, high temperature, slight icterus; tenderness over liver; died eleven days after test; autopsy revealed cholangeitis with multiple liver abscesses
304 O. S.	100%	65.5%	57.6%	White man, aged 27, quite ill; moderate icterus; high temperature; diagnosis, hepatitis following appendical abscess; recovered
307 T. G.	100%	73%	53%	Negro man, aged 30; bullet wound in region of liver followed by moderate jaundice; septic fever; recovered

of the dye has been noted, and probably indicates the presence of an acute syphilitic hepatitis in spite of the clinical silence of the liver. Long continued treatment with arsphenamine and mercury does not disturb the liver activity. Arsphenamine dermatitis unaccompanied by icterus shows elimination of rose bengal within normal limits.

In general, it may be seen that the rose bengal test for liver function gives results in direct proportion to the clinical and pathologic data noted in regard to the liver. The process that involves the greatest number of liver cells should show the greatest inability to excrete rose bengal from the blood stream. Delprat has shown experimentally that when a large number of liver cells in the dog are destroyed by chloroform, rose bengal is retained in high concentrations in the blood stream. Clinically, acute yellow atrophy of the liver is analogous to this condition but we have not had such a case in

which to apply the test. However, we have encountered a series of cases in which there has been a very extensive involvement of liver parenchyma by an infectious process. Table 2 shows the data obtained in these cases.

The observations in this series of cases are of great interest. It will be noted that with the patients having extreme pathologic processes within the liver, the dye was retained in the blood stream in very high concentrations. We were able in two of the cases to examine the liver pathologically and observed a very severe infectious process. The two patients who eventually recovered showed less impairment of liver function. The impairment of liver function in these cases was not in proportion to the amount of jaundice present. There was only slight icterus in the patients who succumbed to their infection. The test was of very definite value in noting the extent of liver injury present.

TABLE 3.—*Nephritic Toxemia of Pregnancy*

Case	2 Minutes	8 Minutes	16 Minutes	Clinical Notes
239	100%	50%	....	J. W., negress, eight months pregnant (?); edema of lower extremities; one convulsion; albumin in urine, ++++; blood pressure, 160/110; recovered; no icterus
241	100%	58%	31%	C. C., negress, at term; numerous convulsions; albumin, ++++; blood pressure, 185/110; delivered spontaneously; recovered; no icterus
301	100%	52%	....	L. B., negress, seven months pregnant; many convulsions; no icterus; albumin, ++++; casts, ++++; blood pressure, 180/100; delivered spontaneously; recovered

TABLE 4.—*Tuberculous Peritonitis*

Case	2 Minutes	8 Minutes	Clinical Notes
165	100%	61%	C. S., a white woman, aged 32; ascites; slight fever; slight icterus; at operation, 4,000 cc. of bile tinged clear fluid; peritoneum thickened and congested; biopsy, tuberculous infiltration of the peritoneum

TOXEMIAS OF PREGNANCY

Three cases of toxemia were encountered, all of which were similar clinically, presenting large amounts of albumin in the urine with casts, edema of the extremities, high blood pressure, convulsions and no jaundice, and in which there was recovery after delivery. A clinical diagnosis of nephritic toxemia of pregnancy was made. Examination of table 3 shows that all of these were cases of definite eclampsia without icterus and probably nephritic toxemia. There was no retention of rose bengal in any of them. Recovery occurred in all three cases.

TABLE 5.—*Cirrhosis of the Liver*

Case	2 Minutes	8 Minutes	16 Minutes	Clinical Notes
309 L. B.	100%	64%	41%	A white woman, aged 30, with ascites, large spleen; hepar lobatum; Wassermann reaction, ++++; at operation, liver lobulated; functioning liver tissue not particularly decreased
321 J. C.	100%	78%	58%	Alcoholic cirrhosis; marked ascites
D 2 J. S.	100%	82%	....	Marked cirrhosis; repeated tappings; Wassermann reaction, ++++
D 54 S.	100%	84%	76%	Very marked ascites; alcoholic cirrhosis

TUBERCULOUS PERITONITIS

One more case of tuberculous peritonitis is added to our previous reports. The presenting symptom was ascites and the diagnosis was made at operation. The data are given in table 4. The test gave results within normal limits.

CIRRHOSIS OF THE LIVER

Four cases as shown in table 5 are added to the group of cases of cirrhosis of the liver. The results in this group of cases are identical with those in cirrhosis of the liver as previously reported.

TABLE 6.—*Malignant Condition with Obstruction of the Bile Ducts*

Case	2 Minutes	8 Minutes	Clinical Notes
76 W. P.	100%	68.4%	Extensive carcinoma of head of the pancreas; obstruction of the bile ducts relieved by cholecystoduodenostomy two months previous; died three months later
109 M. B.	100%	84%	Marked obstructive jaundice secondary to carcinoma of head of the pancreas; died six weeks later; no autopsy

Two cases of a malignant condition causing obstruction of the bile passages are presented in table 6, one with the obstruction relieved by cholecystoduodenostomy and the other without surgical intervention. It can be seen that the patient operated on had a much better liver function than the one with complete obstruction.

The two cases summarized in table 7 illustrate how variable the results may be in metastatic malignancy of the liver, the first case showing a very good elimination of the dye while the second showed a very definite delay in the excretion of rose bengal.

TABLE 7.—*Metastatic Malignancy of the Liver*

Case	2 Minutes	8 Minutes	16 Minutes	Clinical Notes
251 F. K.	100%	33%	10%	Very much enlarged liver, which appeared four months after the removal of a melanoma of the choroid
300 A. T.	100%	64%	52%	Very large nodular liver with slight icterus; marked loss of weight; operation showed extensive metastatic carcinoma in liver

Catarrhal jaundice causes a very definite delay in the elimination of rose bengal from the blood stream. As the clinical condition improves, the liver function as denoted by the test improves in almost direct proportion.

TABLE 8.—*Catarrhal Jaundice*

Case	2 Minutes	8 Minutes	16 Minutes	Clinical Notes
288 (1) T. E. (2) (3)	100% 100% 100%	73% 60% 53%	51% 27% 18%	(1) Moderate icterus with high fever, septic type; very little jaundice left; (2) temperature subsiding; (3) about well
330 L. M.	100%	....	60%	Rather deep jaundice; pregnant six months; feels fairly well
156 P. H.	100%	51%	....	Slight icterus for one day; normal at time of test

SUMMARY

Changes in the technic of the rose bengal liver function test, as here described, greatly simplify the procedure and give more accurate information. The simplification of the technic of the test makes it available to all clinicians.

A review of the results of tests in certain pathologic states of the liver is given.

CONCLUSIONS

1. The results of the rose bengal liver function test correspond closely to the extent of the pathologic process within the liver and closely parallel the clinical observations.

2. Acute infections of the liver cause a marked impairment of liver function.

3. Nephritic toxemias of pregnancy do not cause delay in the elimination of rose bengal from the blood stream.

4. Continued application of the test confirms previous observations as to its value as an aid in diagnosis and in estimating the prognosis of certain diseases of the liver.

University of California Hospital.

THE RADICULAR SYNDROME*

JOHANNES M. NIELSEN, M.D.
BATTLE CREEK, MICH.

Entire systems of commercialized pseudosciences have been constructed around the radicular syndrome. This is due to two main factors: (1) the tendency of the regular practitioner to consider mild cases functional and treat severe ones as neuritis or lumbago, and (2) the ease with which the pain is frequently relieved temporarily at least by treatment which trained technicians can give and which it is considered beneath the dignity of the physician to administer personally.

This syndrome arises from any interference with the spinal nerve roots, i. e., that portion between the spinal cord and the fusion of the roots to form peripheral nerves. The roots are within the spinal canal and largely within the dura. They are bathed in cerebrospinal fluid and are consequently influenced by changes in spinal fluid pressure as well as by meningeal disease. As the roots merge they pass through the intervertebral foramina. Detailed description is not attempted here.

Involvement of the roots themselves has been called radiculitis, and of the fused portion which passes through the foramina, funiculitis, or neurodocitis. Williams [1] states that one cannot tell clinically which portion of the root is affected. There is a general tendency to speak of the radicular syndrome rather than radiculitis, as the symptoms may be due to any form of mechanical interference as well as to inflammation. In any event, the distribution of the lesion in the skin or muscles is a root distribution and not that of peripheral nerves.

My purpose in this communication is to call attention to the frequency of the syndrome, the variety of conditions giving rise to it, and to offer a few contributions to its symptomatology and treatment.

The scarcity of the literature on the radicular syndrome is striking. Few articles have appeared in the last decade and the subject is omitted from several important textbooks on nervous diseases. Mayer [2] has given a scholarly account of it and Williams [1] has presented an excellent differential diagnosis between radiculitis and neuritis. Except for giving sedatives, the treatment is mostly by means of physical therapy and has been well covered by Pope,[3] who gives a complete account. Williams [1] expressed the belief that spinal stretching might be of benefit.

Ten cases selected from a large number are presented to illustrate certain points. Herpes zoster and syphilis are common causes of radicular pain, and such cases have therefore been excluded.

REPORT OF CASES

CASE 1.—I. L., a man, aged 65, an executive, complained of numbness and pain of six weeks' duration in the left arm, forearm and hand. Ten years before he had had a similar attack with spontaneous remission.

Examination showed fibrillary twitching in the muscles of the entire arm. There was no tenderness in the painful area. The Wassermann test on the blood, and Wassermann, cell count, colloidal gold and globulin tests on the spinal fluid were all negative. There were no signs in the lower extremities to suggest an upper motor neuron lesion. Spinal cord tumor, syringomyelia, amyotrophic lateral sclerosis, progressive spinal muscular atrophy and arthritis were considered.

It was discovered that if the patient lay on the right side resting his head on three pillows the pain was provoked. Resting on the right side without any pillow relieved the pain. This led to an examination of the cervical spine and it was found that flexion to the left produced the pain, flexion to the right relieving it. A roentgenogram revealed a high-grade osteoarthritis. The dynamometer test showed left 10, right 118.

Massage, passive spinal movements, and hot and cold percussion douches were used. In three weeks twitching ceased; the pain diminished; strength of the muscles gradually returned, so that the left hand showed (tests every few days) 18, 25, 28, 36, 48, 52, 58, and finally after one month 95 on the dynamometer. Pain then ceased entirely and did not return.

CASE 2.—F. O. B., a white man, aged 30, a farmer, complained of shrinking and weakness of the muscles of the right forearm and hand, and also of a scalding pain occasionally in the same area, all of one year's duration.

Examination confirmed the statement of atrophy but showed that the dorsal interossei and the adductors of the thumb (eighth cervical, first dorsal) were most affected and there was no tenderness. There was no evidence in the lower extremities of any upper motor neuron lesion.

A diagnosis of radicular irritation was made, etiology not found. The patient was instructed to have massage and percussion douches to the spine as well as massage of the affected muscles. In two months he returned; there was definite regeneration of the muscles but no pain.

CASE 3.—W. F. D., a white man, aged 50, a conductor who had been injured in a railroad accident twelve years before, complained of pain in the right hip joint, at times radiating down the distribution of the right sciatic nerve. There was very little pain when reclining, but the patient was unable to sit or stand because of the agony produced.

Six months before, when the symptoms began, he paid little attention to them. After three weeks he was forced to remain at home. He went to Hot Springs, where he spent a month. After returning home he remained quiet a month and then had chiropractic treatments daily for another month. This seemed to relieve him at first, but he soon developed so much pain that he was totally unable to work. There was no tenderness in the hip.

Examination confirmed the patient's statements. Diagnoses considered were malignancy of the prostate with metastasis, disease of hip joint, and a radicular irritation with referred pain. A roentgenogram of the lower spine showed an old fracture of the fifth lumbar and first sacral vertebrae, with collapse of the former. Strangely, the symptoms referred to the fourth lumbar segment, but this was probably because pressure was greatest against that root. The patient was hospitalized for treatment in a cast.

CASE 4.—J. A. M., a white man, aged 45, an executive, who twenty-five years before had sustained a comminuted fracture of the left elbow in a football game, complained of a severe scalding pain in the dorsum of the left arm and forearm for a period of seven years. Physicians consulted had invariably ascribed the pain to the fractured elbow.

---

* From the Battle Creek Sanitarium Clinic.

1. Williams, T. A.: Differential Diagnosis of Radiculitis and Neuritis, Arch. Diagn. 14: 140-149 (Jan.) 1922.
2. Mayer, E. E.: Radiculitis: Its Diagnosis and Interpretation, J. A. M. A. 71: 353-358 (Aug. 3) 1918.
3. Pope, Curran: The Radicular Syndrome, Arch. Physical Therapy 7: 584-600 (Oct.) 1926.

Questioning revealed that he had taken some strenuous chiropractic treatment one year prior to the onset of symptoms.

Six weeks before his visit here the patient had received a severe jar to the left arm in attempting to hold an automobile which was starting down a hill. This gave him complete relief from his symptoms for five weeks, so that he felt like a new man. At the end of the five weeks he strained at a garage door which was caught, and immediately all his old symptoms returned much aggravated. He would lie for hours on the floor at night crying with pain, and he could not sleep.

Examination did not demonstrate any tenderness whatever in the arm but showed almost complete atrophy of the biceps and triceps, with a little atrophy of the muscles of the forearm. There were fibrillary twitchings and marked weakness of the arm muscles, as well as spasm of the muscles of the neck. Pressing the head to the right relieved the pain, to the left produced it, but this the patient had never discovered.

As the muscles involved are innervated not by a single peripheral nerve but by the fifth, sixth and seventh cervical roots, a roentgenogram of this region was ordered. This disclosed an old fracture of the fifth and sixth cervical vertebrae, with partial collapse of the bodies on the left side. A marked scoliosis was consequently present. There was also considerable exostosis about the area and a compensatory scoliosis in the dorsal region.

The patient was given massage, hot and cold percussion douches, and corrective manipulations to overcome the scoliosis, and was then fitted with a collar flanged to shoulder pieces. A brachial plexus neuritis developed under the treatment and this was treated in turn. After five weeks the pain disappeared entirely and had not returned five months later. He wears the collar twelve hours a day.

CASE 5.—Miss A. M. S., aged 39, complained of symptoms quite characteristic of duodenal ulcer. She also had badly infected tonsils and a chronic multiple arthritis. On medical treatment for the ulcer, all symptoms of this disappeared. Her tonsils were then removed, resulting in a general flare-up of the arthritis. After a few weeks this subsided but the patient suddenly developed attacks of severe pain over McBurney's point. This was followed by a slight exacerbation of fever and by marked tenderness to camel hair touch and to pressure over the same areas. The patient was watched for developments, but the leukocyte count did not rise above 11,100. Other tender points developed, and when a week had gone by and the symptoms were stationary, I saw her. The areas involved when first seen were, right side, third dorsal and tenth dorsal to first lumbar, inclusive; left side, fourth dorsal, seventh dorsal, eleventh dorsal and first sacral, but the symptoms would shift to neighboring segments at times. Improvement has been slow and exacerbations occur, but the patient is recovering.

CASE 6.—R. F. W., aged 46, a physician, suffered from cholecystitis. At operation the infected gallbladder was removed and by request an appendicostomy was done. The appendix was loosened accidentally after a few days, causing infection, which lasted for several weeks.

Shortly after the infection cleared the patient was seized with severe stabbing pain in the right chest both anteriorly and posteriorly at the level of the spine of the scapula. Erect posture greatly aggravated the pain. Diagnosis was deferred until study of the chest was made. The area involved conformed to the distribution of the third dorsal segment, with exception of the axillary distribution. This developed on the third day and a diagnosis of radiculitis was made. Muscle spasm severe enough to prevent respiration occurred in the thoracic muscles. There was intense hyperesthesia in the segment involved. The patient was kept quiet and was given diathermy, fomentations, radiant heat, methenamine and frequently heroin to control the pain. It persisted for six months and gradually disappeared. But even after this time, much exertion or exposure caused exacerbation of symptoms.

CASE 7.—R. A., boy, at the age of 14 was taken with attacks of pain in the region supplied by the fourth to the seventh dorsal segments on the left side. The pain completely incapacitated him for a day at a time. There was constant exquisite hyperesthesia to light touch, even clothing causing severe pain. Bouts of pain with continuous hyperesthesia continued for four years, when the sensory roots in the segments named were cut by a neurologic surgeon. The pain in the original four segments was replaced by total anesthesia, but soon recurred in the segment immediately above. This demonstrates the tendency of the infection to spread to the neighboring roots in a person predisposed.

CASE 8.—Miss J. G., aged 25, fell off a horse at the age of 16. She has since suffered from soreness and lameness of the lumbar spine, with an area of hypesthesia and numbness on the left thigh. This area, when mapped out by a camel's hair brush, corresponded anatomically to that of the second lumbar segment. The lameness of the back persists—she is hardly able to straighten her spine at times—but the stereogram does not reveal anything abnormal. The patient has so far not taken her trouble seriously enough to follow treatment.

CASE 9.—C. H. D., a man, aged 53, otherwise well, began to have pain nine months previously in the left arm, forearm and hand. This was of a dull, aching character, with sharp shooting pains interspersed. He slept poorly, was frequently awakened at night, and had not obtained relief at the hands of his physicians.

Physical examination showed considerable tenderness along the spinal column from the first dorsal to the third dorsal, especially on the left, but no tenderness along the arm at site of pain. The left arm and hand were weak and the deep reflexes in the lower extremities greatly increased. Pressure along the tender part of the spine produced tingling in the left hand. There was absence of paralysis of any kind and of trophic disturbances.

A diagnosis of spinal cord tumor was made and the patient referred to Dr. Elsberg of New York, who removed a chondroma from the posterior surface of the body of the seventh cervical vertebra. This was markedly compressing the seventh cervical root. The patient made a complete recovery.

CASE 10.—Mrs. I. T., aged 36, was referred to a surgeon for perineoplasty, which was done under lumbar anesthesia. When this began to wear off the patient complained of severe pain in the tip of the coccyx and in the sacral region. This continued unabated for two weeks and was relieved temporarily by heat but not in any other way except by opiates. With the pain came a saddle shaped area of total anesthesia in the perineum and buttocks, and rectal and vesical insensibility, and the patient became involuntary and incontinent.

When seen two weeks after operation the foregoing was confirmed but there was in addition hypesthesia in the first sacral and second sacral areas on the left and all lumbar segments on the right. The lumbar segments escaped on the left, while the first and second sacral segments escaped on the right. The pain was greatly increased by raising the trunk, straining, coughing or sneezing. A diagnosis of a cauda equina lesion was made—probably hemorrhagic. Improvement has been steady but slow. At this writing, five weeks from the onset, there is marked sensitiveness in the area formerly totally anesthetic. The other segments have returned to function but the patient walks clumsily.

COMMENT

It will be seen that while syphilis is the cause *par excellence* and herpes zoster is common, there are many other fairly common causes. Among these trauma ranks high, and inflammation following the removal of a focus of infection at times causes the radicular syndrome. In one case of this series (case 4) the fracture was almost certainly due to "adjustments" and in case 3 an old fracture was rebroken in the same way.

Of symptoms worthy of note, the influence of change of spinal posture is striking. When the symptoms affect the upper extremities, movements of the neck will frequently cause or relieve the pain according to the direction of motion. The erect posture is often productive of pain when the horizontal posture is well tolerated.

Pain without accompanying tenderness to pressure is also highly characteristic. Lack of tenderness in the affected area is almost a constant finding in the radicular syndrome. There is a group of cases in which intense hyperesthesia to light touch is striking. It is frequently so great that not even the weight of clothing is borne. This may give the impression that there is tenderness, but in these cases deep pressure causes no more pain than light touch and the presence of pain without deep tenderness still obtains.

Other symptoms characteristic in inflammatory cases are: (1) the spread of the symptoms to other segments and disappearance of them but always with retention of the radicular distribution; (2) the onset weeks after removal of a focus of infection, and (3) long duration of the symptoms (months) after removal of the cause.

Atrophy occurs in radicular pressure and hence is not diagnostic of neuritis. This was one of the most striking symptoms in cases 2 and 4. When muscles are atrophic, weakness is of course noticeable.

A few observations not previously described should be recorded. There is in the presence of radicular pain a peculiar affective state which at first is puzzling—that of quiet, patient suffering. The patients do not writhe or double up or otherwise assume postures as they would do with acute abdominal pain, but lie perfectly quiet, weeping softly. This may easily lead one to suspect malingering. The reason is that the patients do not know how to react to the situation. The pain is felt at the periphery, not at the source; and as hardly anything applied to the periphery—posture, heat, massage—affects the pain, and as motion aggravates it, the patient responds by doing the only thing he can do—remaining perfectly quiet. He usually dares not even cough or sneeze.

Therapeutics will be discussed briefly. Heat of all kinds is gratefully received—fomentations, diathermy, radiant heat—but relief is temporary. Percussion douches, with temperature changing several times from 110 to 50 F., played up and down the spine, help establish permanent cure by improving the spinal circulation. Carefully supervised massage and manipulations designed to correct the scolioses so often present will frequently relieve the symptoms and are of definite value in producing a cure in traumatic cases. Such measures are never used in those of inflammatory origin. Spinal stretching carefully watched will often relieve root pains even of inflammatory origin, tabetic pains included. In inflammatory conditions this is obviously not a cure but does tend to allow more room for the thickened and inflamed meninges. These measures should be exhausted before opiates are resorted to because the condition may last for months and addiction to drugs is difficult to avoid.

SUMMARY

1. Besides the most common causes—syphilis and herpes zoster—frequent etiologic factors in the radicular syndrome are trauma, including "adjustments," removal of foci of infection, and arthritis. In some cases no cause can be found.

2. Characteristic symptoms are pain without deep tenderness of radicular distribution, production or relief of symptoms by change of spinal posture, extreme hyperesthesia to light touch in the affected area, and an affective state of patient, silent suffering.

3. Atrophy of the muscles at times occurs in a radicular syndrome of the motor or the combined type.

4. The danger of drug addiction should be borne in mind constantly. Treatment by means of physical therapy directed toward correcting scolioses or faulty spinal postures is of definite value. Spinal stretching, carefully controlled, frequently gives relief for several hours and aids in recovery.

PHOSPHATURIA AS A LOCAL PHENOMENON

PRELIMINARY COMMUNICATION

EDWIN BEER, M.D.
NEW YORK

For many years phosphaturia and its explanation has been somewhat baffling to clinicians, and there has been a decided tendency to ascribe this phenomenon of milky urine due to phosphates to some kind of metabolic disturbance or diathesis. During the last eight or nine years I [1] have had the opportunity to make a number of observations on phosphaturic patients which suggest that this phenomenon is a peripheral and local one rather than due to any particular metabolic disturbance.

In the study of phosphatic urine, Lichwitz and others have called attention to the fact that a lipoid colloid separates from the urine as the urine becomes the milky urine of phosphaturia. On the other hand, if urines containing phosphates approach the alkaline reaction, dibasic calcium phosphate, tribasic calcium phosphate and dibasic magnesium phosphate precipitate out and produce a phosphaturic turbidity. As certain diets (vegetable, fruit and alkali) produce an excess of phosphates in the urine, either one of the foregoing factors —perhaps all three—may be responsible, in a measure, for the phosphaturia. My observations would suggest that this change takes place in the urinary tract on the mucosa of the urethra or ureters and perhaps similarly in the bladder, and that apparently the process is an instantaneous one.

The observations reported here will serve as evidence in favor of this peripheral or local character of the phenomenon.

CASE 1.—A cystoscope was passed into the bladder of a man and clear, brilliant normal urine was obtained. Both ureters were then catheterized with dry catheters (formaldehyde sterilization). The urine from the right kidney was normal, clear and brilliant, whereas, the urine from the left kidney was very milky as a result of phosphaturia. It is evident that this case affords an instance of unilateral phosphaturia, and as the combined urine obtained from the bladder was brilliant and clear, it would appear that the passage of the ureteral catheter up the left ureter may have induced (or discovered) a phosphaturia by upsetting the solubility of the urine, probably in the sense of a colloidal or a reaction change to which reference has been made.

CASE 2.—A man voided typical milky urine containing phosphates and also carbonates. Immediate catheterization of the bladder with a dry silk catheter drew off several ounces of brilliant, clear normal urine. It is evident that in this observation, the bulk of the urine was changed in its passage through the male urethra and that the process must have been a local one as the residue obtained within a few minutes was clear and brilliant.

CASE 3.—A woman voided urine which was typically milky, and immediate catheterization of the bladder with a soft rubber (sterilized in water) catheter withdrew about 1 ounce of

1. Beer, Edwin: Uric Acid and Uratic Stones in the Kidney, Surg. Gynec. Obst. **43**: 436 (Oct.) 1926; Analogies Between the Biliary Tract and Urinary Tract, Ann. Surg. **84**: 517 (Oct.) 1926.

brilliant clear urine. It is evident that in this case the upset was effected in the short female urethra, which bears out the instantaneous character of the change that takes place in the urine.

COMMENT

Since these cases were observed a patient presented himself with typical phosphaturia. Immediate catheterization obtained from the bladder 2 ounces of slightly turbid urine, totally different from the voided specimen. When heated with acetic acid, the bladder specimen cleared up with the production of bubbles as the carbonates decomposed. In this case, the change toward phosphatic urine apparently took place in the passage through the urethra, whereas some turbidity due to carbonates had already been effected in the bladder or higher up.

In case 1, it might be thought that the catheter upset the colloidal system, or the reaction; but in cases 2 and 3, unless the explanation that the process is a local phenomenon is accepted, it will be necessary to conclude that the introduction of the catheter induced an opposite effect, i. e., a colloidal reversal or reversal of the reaction, which should take place in phosphatic urines outside the body by immersing in them a catheter or other foreign body. As such does not occur, it seems to me that we must conclude that there is a phosphaturia due to local urinary tract conditions in which local infections do not play a part. Further study will demonstrate whether this local phenomenon is present in only some or in all cases of phosphaturia.

45 East Eighty-Fifth Street.

DIABETES MELLITUS AND CONCOMITANT LEUKEMIA*

JEROME GLASER, M.D.
CHICAGO

The simultaneous occurrence of diabetes mellitus and leukemia in the same person is quite unusual. In 1920, Fitz[1] reported a case and summarized two others already described in the literature. The first case was described by Rebitzer,[2] and occurred in a man, aged 56, who had had diabetes for six years. Four months before death, which occurred in diabetic coma, the patient began to complain of a sense of pressure under the ribs and an abdominal swelling. On examination, a greatly enlarged spleen was felt and the leukocyte count was 555,000. At necropsy the observations were characteristic of leukemia, but it cannot be stated from the report whether the leukemia was of the myelogenous or the lymphatic type. Grossly and microscopically, nothing abnormal was noted in the pancreas.

The second case, reported by Schwarz,[3] occurred in a boy, aged 13 years. In this instance the onset of the leukemia seems to have antedated the appearance of the diabetes, though this point is not certain. The patient had an enlarged spleen and a leukocyte count of 344,000. At necropsy, the lesions of miliary tuberculosis as well as those of myelogenous leukemia were demonstrated. Grossly, the pancreas was brownish. Microscopically, abnormalities were not noted.

Fitz'[1] patient was a woman, aged 40, who was known to have had diabetes of at least four months' duration. Two months after the diabetes was discovered, a mass was observed in the upper abdomen, and two months later, on admission to the hospital, there were noted a very large spleen, a secondary anemia, and a leukocyte count of 147,000. Most of the cells were of the myelogenous series. The diabetes was treated by diet and the leukemia by roentgen ray. The patient showed marked improvement, and was discharged after sixteen days in the hospital.

Since Fitz' report, we have been unable to find in the literature any other mention of diabetes mellitus complicated by leukemia. The apparent rarity of the condition seems to warrant the publication of the following case report:

REPORT OF CASE

M. G., a woman, aged 49, entered the hospital, Jan. 15, 1925, complaining of fulness of the epigastrium and loss of weight (31 pounds, or 14 Kg.) of one year's duration, and of excessive thirst during the two months previous to admission. The patient underwent a cholecystectomy two years before admission, at which time sugar was found in the routine examination of the urine. Since then she had attended a diabetic clinic, dieted, and was sugar free most of the time. She had also had a herniotomy, appendectomy and oophorectomy seven years previous to admission. The patient had been married twenty-eight years; she had five children living and well, and not any other pregnancies. Her mother had died of diabetes.

The patient was rather emaciated, with a skin of a marked brown, darker over the elbows and buttocks. This color had appeared gradually during the six months previous to admission. A history of antecedent arsenic or roentgen-ray therapy was not given. The thyroid was somewhat enlarged; there was scoliosis of the thoracic spine; the liver edge was felt three fingerbreadths below the costal margin, and the surface was firm and smooth. The spleen was quite firm and was palpable from the costal margin medially to the midline and downward into the left iliac fossa. A few axillary nodes were palpable. Other superficial lymphadenopathy was not demonstrable.

The history of diabetes, the presence of the large spleen and liver, and the brown skin suggested a diagnosis of bronze diabetes. However, biopsy was done a short time later, and hemosiderin could not be demonstrated in the section of skin examined. The color seemed to be due to the presence of an unusual amount of melanin. On admission, the leukocyte count was 18,000, with neutrophils, 70 per cent; small mononuclears, 6 per cent; large mononuclears, 14 per cent; myelocytes, 4 per cent; myeloblasts, 1 per cent, and unclassified cells, 5 per cent. There were a few nucleated reds. The red cell count was 3,072,000; hemoglobin was 90 per cent; the color index, 1.5; platelets, 125,000; coagulation time, seven minutes; bleeding time, twenty minutes; fragility was complete at 0.34, and partial at 0.46. The basal metabolism was 31 per cent above normal. Roentgenographic examination showed a calculus filling the right kidney pelvis. The Wassermann reaction was negative, but a month later was 2+ to the lipoid and syphilitic antigens. The patient had had a mildly positive Wassermann reaction two months previously and had received a few antisyphilitic treatments. Aside from these Wassermann tests, there was nothing to substantiate a diagnosis of syphilis.

On admission, the urine was sugar free and the blood sugar was 79 mg. per hundred cubic centimeters. On a general ward diet, sugar appeared in the urine and the blood sugar rose to 129 mg. The diabetes was treated by diet, the leukemia by roentgen-ray irradiation of the spleen; the patient left the hospital improved.

Three months later she was readmitted complaining of headache and tinnitus of two months' duration, and of severe pain in the abdomen and the tips of the fingers and toes of several days' duration. She had adhered to her diet, and the urine was sugar free. At this time the leukocyte count was

* From the medical service of the Michael Reese Hospital.

1. Fitz, Reginald: Diabetes Mellitus and Myelogenous Leukemia, J. A. M. A. **75**: 1331 (Nov. 13) 1920.

2. Rebitzer, A.: Ein Fall von Leukämie und Diabetes, Prag. med. Wchnschr. **17**: 356, 1892.

3. Schwarz, E.: Ein Fall von Myelämie mit Diabetes mellitus und Miliartuberculose, Wien. med. Wchnschr. **55**: 414, 1905.

10,000, with neutrophils, 60 per cent; small mononuclears, 26 per cent; large mononuclears, 6 per cent; eosinophils, 1 per cent; myelocytes, 7 per cent. There were a few nucleated red cells. The red cell count was 2,430,000, with 50 per cent hemoglobin. The color index was 1.0. Transfusion was done; the patient improved and was discharged.

Two months later she developed a sore throat resulting in inability to take food. The extremities were swollen, and she could not move her arms. The leukocyte count was 11,000, with neutrophils, 40 per cent; small mononuclears, 33 per cent; large mononuclears, 10 per cent; eosinophils, 7 per cent, and myelocytes, 10 per cent. The red cell count was 1,310,000, hemoglobin, 25 per cent, and the color index, 0.9. The urine contained 24 Gm. of reducing substance in the first twenty-four hour specimen. The blood sugar was 358 mg. The urinary sugar disappeared under diet and insulin. The patient, however, gradually became more edematous, developed pneumonia, and died three weeks after admission.

At necropsy, terminal bronchopneumonia and edema of the lungs were present. There was red hyperplasia of the marrow of the humerus and the vertebrae. Calculi were found in the biliary duct and the right kidney, and fatty degeneration of the liver was noted, without increase of connective tissue. There was marked enlargement and myeloid changes of the retroperitoneal lymph nodes and spleen. Abnormal pigmentation of the liver, pancreas or spleen was not seen. The suprarenals were somewhat small but microscopically appeared normal. The pancreas grossly was quite firm and distinctly lobulated. Microscopically, there was some increase of connective tissue. Numerous islands of Langerhans were present and for the most part, though quite small, they appeared healthy. There were a few quite large islands with cells having large well preserved nuclei. Mitotic figures were not seen and evidence of leukemic infiltration was lacking.

COMMENT

It is interesting to note that of the four cases discussed above three came to necropsy, and in none of these did microscopic examination of the pancreas reveal evidence of leukemic infiltration. Therefore, the simultaneous occurrence of diabetes mellitus and leukemia in these cases, at least, cannot be explained on the basis of leukemic infiltration of the pancreas.

In the case here presented, the pathologic evidence of myelogenous leukemia in the spleen and retroperitoneal lymph nodes, together with the qualitative changes in the blood picture without any marked increase in the total leukocyte count, classified the condition as myelogenous leukemia of the aleukemic type. Another unusual feature of the case was the pigmentation of the skin, described above. While bronzing similar in appearance to this occurs in the so-called bronze diabetes, in which group the pathologic observations showed this case not to belong, such bronzing does not occur in the diabetes mellitus. In leukemia bronzing of the skin has been described by Hazen,[4] who mentions its occurrence in two cases of the chronic lymphatic type. Steinbrinck and Stukowski [5] described a case of chronic myelogenous leukemia and mentioned that the patient had a brown skin, but did not go into further detail regarding this feature of the case.

An explanation of the unusual pigmentation of our patient may be found in the theories of Féréol and Nieskowski [6] and of Paget and Fowler.[7] They believed that pigmentation associated with lymphadenopathy is due to disturbance of the sympathetic nervous system and through this of the suprarenals, by pressure of enlarged abdominal lymph nodes on the abdominal sympathetic chains and ganglions. Another and later theory is that of Peters,[8] who made the suggestion, based on work by Eppinger,[9] that an injured liver may be unable to perform its normal function of removing melanin from the circulation and may permit an excess of it to reach other body tissues, thus giving rise to excessive pigmentation.

Twenty-Ninth Street and Ellis Avenue.

4. Hazen, H. H.: Skin Changes in Leukemias and Allied Conditions, J. Cutan. Dis. **29**: 521, 1911.

5. Steinbrinck, W., and Stukowski, J.: Ueber einen Fall von chronischer myeloischer Leukämie mit Hauterscheinungen bei einer Jugendlichen, Ztschr. f. klin. Med. **101**: 375, 1925.

6. Féréol, M., and Nieskowski, M.: Adénie lymphatique, Gaz. d. hôp. **40**: 512, 1867.

7. Paget, G. E., and Fowler, J. K.: Lymphadenosis with Brown Pigmentation of the Skin, Lancet **1**: 258, 1879.

8. Peters, J. P.: Melanuria without Melanosarcoma, Arch. Int. Med. **32**: 709 (Nov.) 1923.

9. Eppinger, H.: Melanurie, Biochem. Ztschr. **28**: 181, 1910.

THE INCIDENCE OF CANCER IN FILIPINOS *

EDWARD B. VEDDER, M.D.
Lieutenant Colonel, Medical Corps, United States Army
MANILA, P. I.

Hoffman,[1] as the result of a very extensive survey of the mortality statistics of cancer in all parts of the world, has drawn the conclusion that cancer is exceedingly rare in primitive races, and that it is a disease of civilized peoples and in a special sense is the result of present day conditions of life.

TABLE 1.—*Death Rate from Cancer According to Hoffman*

Population	Deaths from Cancer	Rate per 100,000
1,190,154	325	27.3

This conclusion differs radically from the statements of numerous observers among various Oriental races who have found malignant tumors to be fairly common. Thus Madden,[2] professor of surgery at the government school of medicine at Cairo, writes: "Malignant disease among tropical and semitropical peoples, even in the black races, is much more common than is generally believed, as figures prepared for the Cancer Research Committee show. With the Oriental and tropical precocity in development, malignant disease often appears at a very early age; epithelioma of the tongue for instance at the age of 10, and cancer of the breast at what may seem to us an absurdly early age."

Among the statistics quoted by Hoffman and on which his conclusion is based are those given in table 1 from a selected population in the Philippine Islands.

The presumption that the cause of death is accurately reported anywhere in the Philippine Islands is hardly justified, as the following quotation from an article published by Dr. Padua,[3] assistant director of the Philippine Health Service will show. "In a previous epidemiological investigation on dysentery in one province, it was ascertained that the cause of death of 55 per cent of the total was determined by municipal secretaries and sanitary inspectors, and of the remaining 45 per cent by qualified presidents of sanitary divisions and medical private practitioners. We cannot at present claim to be able to make a very accurate statistical study of the causes of death." As a con-

* From the U. S. Army Board for Medical Research, Manila, P. I.

1. Hoffman, F. L.: The Mortality of Cancer Throughout the World, Prudential Press, 1915; Causation of Cancer, J. Trop. Med. **27**: 176 (June 16) 1924.

2. Byam, W., and Archibald, R. G.: Practice of Medicine in the Tropics, Oxford University Press, London, 1922, **3**: 2542.

3. Padua, R. G.: The Need of Accurate Morbidity and Mortality Reports, J. Philippine Islands M. A. **5**: 301 (Oct.) 1925.

siderable percentage of the Filipino population die without having been seen by a physician, it may be concluded that statistics based on death certificates afford very little indication of the actual prevalence of malignant tumors among Filipinos.

Probably the best reporting of deaths in the Philippine Islands is in the city of Manila. Table 2, taken from the annual reports of the Philippine Health Service, gives the death rate for cancer for the decade 1915-1924 for the resident Filipino population of the city of Manila. Nonresidents who might come to Manila because of cancer and foreigners are excluded.

From this table it is evident both that the cancer rate is very low as compared with rates in the United States, and that evidence of any increase in these rates during this decade is lacking.

In an effort to obtain some information with regard to the number of malignant tumors among Filipinos that escape diagnosis, the records of a series of 10,000 necropsies were examined. These necropsies were performed in the morgue of the Philippine Medical School between 1907 and 1923, inclusive, by the professor of pathology at the school, or one of the members of his staff. The majority were performed by Vernon L. Andrews, 1908-1913, and B. C. Crowell, 1913-1918.

TABLE 2.—*Philippine Health Service Statistics on Death Rate from Cancer in Manila*

Year	Population	Cases of Cancer	Rate per 100,000
1915	236,940	64	27.0
1916	236,940	49	20.9
1917	236,940	73	30.8
1918	236,940	81	34.1
1919	257,356	80	31.1
1920	263,386	65	24.7
1921	259,049	84	32.4
1922	273,497	88	32.2
1923	277,625	85	30.6
1924	281,753	91	32.2
		Average	29.60

I am indebted for the privilege of consulting these records and for the publication of these statistics to Dr. Liborio Gomez, who has been professor of pathology from May, 1923, to the present.

These necropsies have been performed in all cases in which a postmortem examination is requested from the Philippine General Hospital, the San Lazaro Hospital, and other hospitals of Manila, as well as in cases of sudden and unexplained deaths occurring in the city of Manila.

In tabulating these cases, the necropsies on Americans, Europeans and Chinese have been excluded, since only the cancer rate in Filipinos is under consideration. Stillbirths also were excluded. These cases numbered 1,040, leaving 8,960 necropsies on Filipinos of all ages to be considered, of whom 5,810 were males and 3,150 females. There were thirty cases in which a tumor was found but in which the diagnosis of the tumor was indefinite. Only those cases in which the diagnosis of the tumor was definite have been included in these statistics. Therefore, although the diagnosis of cancer at necropsy is more accurate than a diagnosis during life, these figures do not give the total cancer rate among those Filipinos coming to necropsy.

The facts disclosed by this survey of 8,960 necropsies are shown in table 3.

That is to say, among these Filipinos coming to autopsy, 173 in 8,960, or 1,930 per hundred thousand, have cancer when they die, or 233 in 8,960, or 2,600 per hundred thousand, have some form of malignant tumor when they die. One out of every 38.4 of these persons coming to postmortem examination had some type of malignant tumor, in spite of the fact that these postmortem clinics contained an unusual number of cases of tuberculosis, cholera, dysentery, typhoid and beriberi, because those dying in Manila under suspicious circumstances from a sanitary point of view are sent for postmortem examination. Only 1,995 of the 8,960

TABLE 3.—*Incidence of Tumor as Cause of Death in 8,960 Necropsies*

Diagnosis	Carcinoma	Sarcoma	Benign Tumors
Number	173	60	132

patients were 40 years of age or over. Approximately 30 per cent of the carcinomas in Filipinos occur under the age of 40, which means that approximately one out of every sixteen of the 1,995 patients 40 years or over had carcinoma at the time of death. Twenty of the sixty sarcomas occurred in persons 40 years of age or over, so that approximately one out of every fourteen Filipinos of 40 years of age or over coming to necropsy had a malignant tumor. Since none of these necropsy cases were diagnosed as malignant disease during life, we may at least conclude that there are many more cases of cancer among Filipinos than are shown by the official death rates.

It may be contended that these necropsies contained an unusual number of cancer cases because of the inclusion of a large number of such cases from the Philippine General Hospital, where such patients possibly congregate. That this is not true is shown by the fact that the cases diagnosed during life at the Philippine General Hospital do not come to the postmortem table. In operable cases, operation is performed and the patients leave the hospital recovered. If they die later, their deaths are reported from the district where they live. Those that die in the hospital are reported as having died from cancer if the diagnosis is obvious. Thus, from March 6, 1915, to Dec. 31, 1921, there were 150 cases of cancer out of 7,545 males admitted to that hospital, a percentage of 1.98; and from Jan. 1, 1918, to Dec. 31, 1921, there were 233 cases of cancer out of 3,467 female admissions, a percentage of 6.1. That few of these cases were examined

TABLE 4.—*Location of Cancer in Cases from Philippine General Hospital*

Males	Per Cent	Females	Per Cent
Stomach and pylorus	15.33	Breast	26.3
Cheek	12.66	Uterus	25.1
Penis	12.00	Cheek	17.0
Neck	8.66	Neck	4.9
Tongue	6.00	Vagina	2.25
Lip	4.33	Stomach and pylorus	2.25
Total	58.98	Total	77.80

post mortem is shown not only by the total figures (383 cases of cancer admitted to the hospital between 1915 and 1921, while only 173 cases were found at necropsy, between 1907 and 1923), but also by the location of the carcinomas found during life as compared with the location of cancers found at necropsy.

Thus, Guazon,[4] who reported this series of cases from the Philippine General Hospital, found the dis-

4. Guazon, P. C.: A Study of Cancer Cases in the Philippine General Hospital, J. Philippine Islands M. A. **5**: 159 (June) 1925.

tribution of the majority of the cases to be as indicated in table 4.

In the necropsy series there was not a single carcinoma of the tongue or lip, and only one of the breast. The actual distribution is given in table 5.

In addition there were two cases, of both the rectum and the intestine, one case from the suprarenal, penis, lung, bladder, mediastinum, breast and toe. The remaining four cases were generalized carcinoma in which the site of the primary tumor could not be identified.

The average death rate per thousand for resident Filipinos in Manila from 1915 to 1924 was 29.77, or 2,977 per hundred thousand. According to the necropsy statistics, 2.6 per cent had nondiagnosed cancer or other malignant tumor growths when they died. Not all of these people died as the result of cancer, though the majority did. But in accordance with the rules as to the classification of the causes of death, constitutional diseases should have preference over those known to be local diseases. Thus, if cancer and pneumonia coexist, the preference should be given to cancer. Since statistics in the United States are collected on this basis,[5] in order to obtain a correct cancer

TABLE 5.—*Location of Cancer in Cases Examined at Necropsy*

	Cases	Per Cent
Gallbladder and liver	67	38.7
Stomach and duodenum	23	13.3
Uterus	19	10.9
Neck	16	9.2
Head	6	3.4
Pharynx and esophagus	6	3.4
Pancreas	5	2.8
Retroperitoneal	4	2.3
Cheek	3	1.7
Larynx	3	1.7
Ovary	3	1.7
Prostate	3	1.7
Total	158	90.8

rate for Filipinos 2.6 per cent of 2,977, or 77.40, must be added to the average reported cancer rate of 29.60, making a cancer rate of 107 per hundred thousand of resident Filipinos in Manila. This computation seems not unfair when it is remembered that the necropsy statistics were quite numerous (8,960) and represented a cross section of the Filipino population of all ages between 1 month and 90 years and over.

Taking these figures for what they are worth, they show a higher cancer rate for Filipinos than is now reported for Americans (86.8 for the registration area of the United States in 1922).

If vital statistics with regard to cancer are so inadequate among Filipinos in Manila, where there is a very good medical and sanitary service, it seems probable that similar statistics quoted from American Indians, from India and from China are of even less value. Oppenheim [6] found two cases of carcinoma among 100 routine necropsies on Chinese. At any rate, it is safe to conclude that Hoffman's thesis with regard to the rarity of cancer among primitive peoples is based on insufficient evidence.

Probably the reason cancer rates are low for primitive peoples is that we have very little accurate statistical information concerning their diseases. Certainly, the evidence is insufficient to serve as a basis for theories concerning the cause of cancer. Thus, it has been suggested that the dietary habits of Americans and certain European nations, particularly an overconsumption of meat and sugar, may have some influence on the susceptibility to cancer. The diet of the Filipino is mainly vegetable and consists largely of rice. If our belief that cancer is quite as common among Filipinos as among Americans is correct, it follows that diet probably has little to do with the causation of cancer. On the other hand, irritation acts on the Filipino just as it does on the white race in the production of cancer. The high percentage of cancer of the cheek is caused by the chewing of betel nut and buyo leaf mixed with lime. This habit is more frequent among the women than it is among the men, and the incidence of cancer of the cheek is proportionately higher among the women.

This study does not afford evidence that the incidence of cancer among Filipinos is increasing. There were ninety-two cases of cancer among the first 5,000 necropsies, from Aug. 11, 1907, to Aug. 31, 1916, and eighty-one cases of cancer among the last 5,000 cases, from Aug. 31, 1916, to July 22, 1923. These necropsy statistics also have a bearing on discussions as to whether the actual incidence of cancer in the United States and Europe is increasing. Although diagnosis is far more accurate in the United States than in the Philippines, it is not by any means perfect, and there must also be many cases in the United States that escape detection during life and that would be found at a postmortem. In 1902 it was shown in Berlin hospitals that 20 per cent of cancer cases demonstrated post mortem were not recognized during life. It is probable that the Berlin physicians were quite as skilful as others. If a study of postmortems in the United States should similarly indicate 20 per cent of undiagnosed cancer, the rate of 86.8 for the registration area in the United States for 1922 would be increased to 104.1, a rate practically identical with that calculated by this method for Filipinos. That this is a possibility is further indicated by the experience of the U. S. Census Bureau as quoted by Dr. Rush,[7] showing that in 1914 there was an admitted lack of precision of 14.2 per cent, and a possible error of 41.7 per cent in the diagnosis of cancer in death certificates. With such a lack of precision in diagnosis, how can we solemnly declare that there is a real increase in cancer? The recent paper by Schereschewsky [8] does not afford proof that the increase in cancer is real as he asserts, because after certain statistical assumptions he assigns only 30 per cent of the increase to improved diagnosis, while the possible error in the death certificates on which the whole rate is based is nearly 42 per cent.

CONCLUSIONS

1. The real cancer rate for Filipinos is not any lower than the cancer rate in the registration area of the United States, and the assumption that cancer is preeminently a disease of civilization is untenable.

2. Cancer rates in all countries may be expected to increase as diagnosis and reporting are improved until the statistics reflect the actual incidence of cancer.

5. Pearl: Medical Biometry and Statistics, Philadelphia, W. B. Saunders Company, 1923, p. 65.

6. Oppenheim, F.: Ueber die Haufigkeit einzelner Befunde bei 100 in Shanghai ausgeführten Chinesen Sektionen, Tung-Chi Medizinische Monatschrift, 1925, number 2.

7. Rush, J. E.: Cancer Statistics, J. A. M. A. **84**: 1376 (May 2) 1925.

8. Schereschewsky, J. W.: Cancer Mortality in the Ten Original Registration States, J. A. M. A. **85**: 1175 (Oct. 17) 1925.

CLINICAL DATA AND PROGNOSIS IN CASES OF CHRONIC PYELONEPHRITIS *

WILLIAM F. BRAASCH, M.D.
AND
EDWARD P. CATHCART, M.D.
Fellow in Urology, the Mayo Foundation
ROCHESTER, MINN.

Of the various lesions affecting the urinary tract in the adult, chronic pyelonephritis furnishes the greatest problem to the urologist. In a discussion of this disease it should be recognized that the cases should be divided into several definite clinical groups. Acute and subacute forms of pyelonephritis should not be confused with chronic bilateral pyelonephritis, since they are self-limiting and often unilateral.

A common type of chronic urinary infection is characterized by recurring attacks of acute pyelonephritis accompanied by a febrile reaction, which subsides after several days, although frequency may persist for several weeks. When patients are examined in intervals between attacks they are usually free from any evidence of urinary infection, and cystoscopic examination and urine cultures may be negative. Such a negative phase may exist for months, to be followed by a recurrence in the acute form. Following removal of all foci of infection and after the development of a natural immunity, patients usually recover. There is another group of cases of chronic infection largely involving the bladder in which only a few pus cells or positive cultures may be obtained at intervals from the ureteral specimens. Such cases are also usually self-limiting, and are amenable to local treatment.

The type of pyelonephritis that we shall discuss here is present many years. It occurs in the adult, is usually bilateral, and resists all specific therapeutic measures so far advanced. In the Mayo Clinic during a period from Jan. 1, 1910, to Jan. 1, 1926, 2,040 patients suffering from chronic bilateral pyelonephritis have been observed. In order to determine the eventual course of the disease, and the results of the various methods of treatment, a certain group of 251 of these patients were studied continuously for a period of from ten to fifteen years.

CLINICAL DATA

Symptoms.—The symptoms of urinary frequency, persisting for a long time with variable pain referred to the lumbar area, and occasional attacks of acute renal infection, are common in cases of chronic pyelonephritis, and they do not, therefore, merit detailed discussion. In a few of the cases in the series a comparatively small number of pus cells persisted in the urine in the course of routine examination and there were no symptoms referable to the urinary tract. These patients did not show any change as a result of the usual methods of treatment. It may be inferred that they had a relatively high degree of immunity to the infecting organism. It is noteworthy that the longstanding urinary infection seldom affected the patient's general condition. Physical examination usually failed to disclose any lesion that might have resulted from the chronic urinary infection.

Cystoscopy.—Cystoscopic examination will usually disclose moderate infection in the bladder, but the character of the inflammation, the areas of ulceration, and the reduced capacity of the bladder are frequently similar to those found in cases of renal tuberculosis, and it may be difficult to differentiate the two diseases. Ureteral catheterization is usually uneventful, although there may be moderate obstruction to a catheter at or near the vesical portion of the ureter. The number of pus cells in the catheterized specimen varies considerably from day to day, from fifty to a hundred one day and only five or ten several days later. A reduction in the number of pus cells or their absence, unless observed repeatedly, is not of much value in determining the degree of improvement.

Roentgenography.—The primary roentgenogram in cases of chronic pyelonephritis is usually not of much clinical value. A stone-forming tendency, which is apparently secondary to the chronic renal infection, is, however, occasionally observed. There was a history of the passing of renal calculi or evidence of stone in the roentgenogram in twenty-eight cases. In most cases the stones were small and in several cases were passed spontaneously. Occasionally multiple minute calcareous areas are visible in the renal area, and on exploration have been found to be caused by particles of sandlike material. It was found necessary to operate for lithiasis apparently secondary to chronic pyelonephritis in twelve cases. The question occasionally arises whether it is advisable to attempt surgical removal of these small stones when they do not cause local symptoms, particularly if on continuous observation they do not increase in size. It is questionable whether their removal could materially influence the course of the pyelonephritis.

Urography.—The deformity of the outline of the pelvis and ureter in chronic pyelonephritis is usually typical, being characterized by marked dilatation in the ureter, with slight if any dilatation in the pelvis, and usually none in the calices. The typical ureter is dilated irregularly throughout and presents the appearance of multiple areas of constriction. In most instances, however, it would be impossible to ascribe the irregular dilatation to obstruction alone, but rather to the result of chronic inflammation and cicatrization of the ureteral wall. The greatest dilatation is usually observed in the upper third of the ureter and it frequently stops abruptly at the ureteropelvic juncture, leaving the pelvis and calices intact. It might be inferred that there is some anatomic factor in the nerve supply, or musculature, at the ureteropelvic juncture which is able to limit the dilatation to the ureter. With the ureteropelvic juncture dilated to the extent of the ureter below, the pelvis may be but slightly dilated and the calices normal. The pelvis and calices are seldom dilated as with intermittent hydronephrosis. Cicatricial changes are frequently observed in the calices with resulting reduction in size and irregularity in outline. Occasionally there is evidence of necrosis in the outline of the calices which may be confused with renal tuberculosis. Although dilatation in the ureter is largely the result of inflammatory changes in the walls of the ureter and pelvis, ureterectasis extending uniformly upward from the ureterovesical juncture may result from an area of constriction. Even though the catheter meets no obstruction, it is conceivable that the mucosa may have been so edematous at this point as temporarily to occlude the lumen of the ureter, and induce ureterectasis. Occasionally in advanced cases the ureter may be so greatly constricted as to be impassable to the ordinary ureteral catheter. In such cases the obstruction

* From the Section on Urology, Mayo Clinic.

is usually at or near the wall of the bladder, and the ureter may be so tortuous that it is difficult to introduce even a filiform sound or the smallest catheter. The constricted area may sometimes involve the entire lower third of the ureter or more. If the cicatricial tissue is

Fig. 1.—The irregular, tortuous outline of the ureter, with alternating areas of dilatation and constriction is frequently seen in cases of chronic pyelonephritis. The pelvis is not dilated and the calices appear contracted and cicatricial.

so dense that dilation is difficult, the advisability of cutting the intramural portion of the ureter might be considered (figs. 1, 2, 3 and 4).

Gross Hematuria.—Gross hematuria accompanying chronic pyelonephritis usually originates in the areas of eroded, cicatricial mucosa or in granulomas in the renal pelvis or ureter. As a rule the bleeding is moderate, but it may become serious. Although it can be controlled by lavage of the pelvis with solutions of silver nitrate, nephrectomy may in rare instances be necessary. When gross hematuria has occurred, the urogram usually shows marked typical deformity of the pelvis and ureter as a result of the long-standing cicatricial changes. Filling defects in the pelvic outline caused by blood clots may be confused with those caused by epithelioma of the pelvis or ureter. In case of doubt it would be necessary to make the urogram in the interval when there is no bleeding.

Renal Function.—The renal function, as a rule, remains normal even after many years of infection. If there is reduction in function, it occurs either after the infection has existed for many years or as a sequel to some acute complication. Owing to the dilatation of the ureter, the excretion of the dye may be delayed and give an erroneous impression of function. A more accurate estimate of function can usually be made by means of retention tests, and in the routine examination of chronic pyelonephritis we rely largely on the estimation of the blood urea. The clinical symptoms caused by renal insufficiency with chronic pyelonephritis are those that usually accompany interstitial nephritis. Increase in blood pressure, retinal changes or reduction in urinary output, such as occurs with glomerular nephritis are, as a rule, not observed, except as terminal complications. With renal insufficiency present the patient's condition may remain stationary for many years under a proper regimen, such as restriction of protein, rest, external applications of heat, thorough elimination, and regulation of habits of living.

ETIOLOGY

Meisser and Bumpus have demonstrated experimentally the significance of foci of infection in the etiology of chronic pyelonephritis. Bugbee and other observers have discussed the possibility of lesions of the colon as an etiologic factor. Von Lackum has recently demonstrated that nongonorrheal prostatic infection acts more often as a focus of chronic infection than was generally believed. It is, in fact, generally recognized that there must be a primary focus of infection in most cases of chronic pyelonephritis, and in every case roentgenograms of the teeth should be made, the tonsils should be investigated, secretion from the prostate and cervix examined, and intestinal stasis excluded. The probability of such foci being closely related to the chronic renal infection is evidenced by the acute exacerbation of symptoms frequently observed immediately following the removal of infected teeth and tonsils.

TREATMENT

Various procedures have been advanced in the treatment of chronic pyelonephritis, not one of which has proved to be specifically successful. Among these pro-

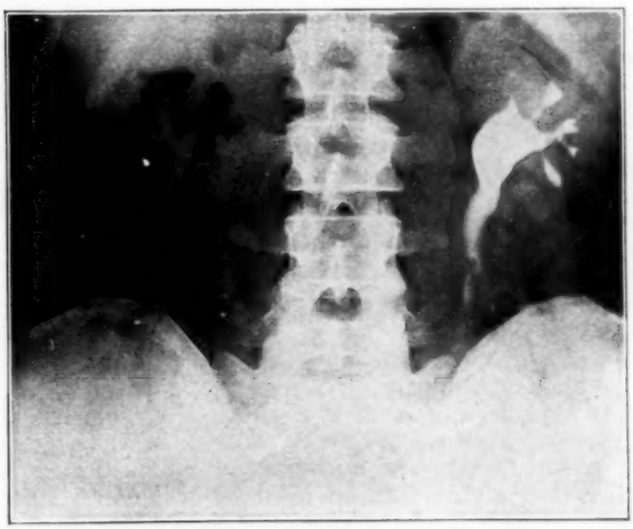

Fig. 2.—Slight pyelectasis is shown, but the calices are contracted and cicatricial.

cedures may be mentioned removal of foci of infection, lavage of the renal pelvis and bladder, dilation of the ureter, internal antiseptic medication, intravenous medication, and vaccines. All these measures have proved to be palliative rather than curative.

Removal of Foci of Infection.—The effect of removing foci in cases of acute and subacute urinary infection is frequently striking. An acute exacerbation of symptoms may immediately follow removal, but subsequent

improvement often takes place. Unfortunately, however, the infection in chronic pyelonephritis is of such long standing that, even though the foci are removed, recovery is not prompt. Nevertheless, they should be removed to prevent further reinfection. This program should include careful examination of the tonsils for evidence of septic material and complete dental roentgenography. Examination of the prostate and seminal vesicles should be made for evidence of infection, even though history of venereal infection is present. This is also true with regard to chronic infections of the cervix. Chronic constipation may also be a factor and should be eliminated by means of dietary precautions and catharsis if necessary. A review of the results of such treatment indicates that there is a greater degree of improvement if all foci have been removed.

Pelvic Lavage.—Temporary improvement can undoubtedly be brought about by lavage of the renal pelvis and bladder with antiseptic solutions, and the procedure is justified. It is our custom to inject slowly 10 cc. of a 1 or 2 per cent solution of silver nitrate into the renal pelvis, with the patient in the Trendelenburg position, and allow it to remain for ten minutes. This is repeated, together with daily lavage of the bladder in the interval, every four or five days. Improvement in the condition of the bladder and reduction in the number of pus cells in the ureteral specimens will usually be evident at the end of three or four weeks. It has been stated that any improvement that may result from this procedure is brought about by dilating the ureter with the catheter. This, however, is open to question, since in most of our cases a number 5 ureteral catheter was introduced and its dilating influence is not probable. It is surprising, after a course of lavage of the bladder and pelvis, how much the patient's urinary symptoms, as well as the general condition, will improve. Patients will repeatedly return at intervals of a few months for further treatment of this kind. That it offers any chance of permanent cure cannot be asserted, of course, but the results justify the procedure.

Fig. 3.—The ureter, although not completely filled, is markedly dilated as far as the ureteropelvic juncture. In spite of this the pelvis is normal and the calices but slightly dilated.

Dilating the Ureter.—As the result of cicatricial changes in the ureter, renal drainage may be interfered with and dilation of the ureter by means of bulbous sounds is indicated. During the last few years we have been dilating the ureter as part of the routine treatment of chronic pyelonephritis. As far as we can ascertain there has been no greater degree of immediate improvement in this group than in the others. The question may well be raised whether actual stricture of the ureter can be permanently relieved by this method. In most cases in which definite areas of constriction were found in the ureter, repeated dilation with sounds even to a caliber of 14 and 16 French failed to give permanent relief. Ureterograms made subsequently usually show little or no change in the degree of ureterectasis.

Internal Medication.—Although it is possible that the internal urinary antiseptics may exert some influence on acute and subacute pyelonephritis, it is difficult to see how any drug can reach the infected interstitial tissues in chronic pyelonephritis. Among the various forms of internal medication that have been used in recent years in the treatment of infections of the urinary tract may be mentioned methenamine, acriflavine and hexylresorcinol. Methenamine has not proved to be of much value in the treatment of chronic pyelonephritis. It is possible that the difficulty in rendering the urine acid has been a factor. Recently it has been found that by combining it with ammonium chloride the acid medium may be secured and the efficacy of methenamine increased. Acriflavine, which gave much promise in vitro of being the long-sought urinary antiseptic, has not been of much value in the treatment of chronic urinary infection. Hexylresorcinol has recently been advanced by optimistic observers as efficacious in overcoming chronic pyelonephritis. We have given this drug in a series of forty cases of chronic pyelonephritis. In most of them two or three capsules were given three times daily for at least two months and the fluid intake was reduced. In not one of the twenty-four cases that we have been able to check up carefully have we observed complete eradication of infection. While the symptoms improved and the amount of pus in the urine was reduced in several cases, in no case was the urine negative either microscopically or by culture. This may be due in part to the fact that in nearly all the cases the infecting organism was the colon bacillus and not a coccus. It must also be said that hexylresorcinol is claimed to be a urinary disinfectant rather than a renal.

Intravenous Medication.—Among the drugs that have been advised for intravenous use in overcoming urinary infection, mercurochrome-220 soluble, acriflavine, arsphenamine and methenamine have been used most widely. While they are of undoubted value in the treatment of acute and subacute pyelonephritis, they have not been effective in eradicating chronic infections. It is true that intravenous medication, particularly with mercurochrome or arsphenamine, is frequently followed by marked reduction in the number of pus cells in the urine; nevertheless in a variable time the previous degree of infection will return.

Vaccines.—Several years' use of vaccines gave us the impression that they had little or no effect and we

have largely discarded them. While the proportion of cures following their use is not greater than the average, it is surprising that a number of patients reported that their symptoms disappeared within a short time following the vaccine. The vaccines were autogenous in most of the cases, and in the others they were prepared from stock colon bacilli.

Surgical Treatment.—Chronic bilateral pyelonephritis is a condition that is not usually considered amenable to surgical treatment. In a review of 2,040 cases of chronic pyelonephritis observed at the Mayo Clinic, surgical treatment was indicated in sixty cases. The various lesions that prompted surgical treatment were: (1) diffuse pyelonephritis with destruction of function in one kidney; (2) unilateral advanced stricture; (3) pyelectasis; (4) secondary formation of renal calculus; (5) atrophic pyelonephritis, and (6) persistent hematuria.

Unilateral exacerbation of renal infection and cicatricial changes with constriction of the ureter occasionally occur with chronic bilateral pyelonephritis and necessitate nephrectomy. Cicatricial changes in the ureter may be so advanced and the destruction of the kidney so great that dilation of the ureter will not produce any permanent benefit. While in a few cases plastic operations may be of value, in most cases nephrectomy will be indicated.

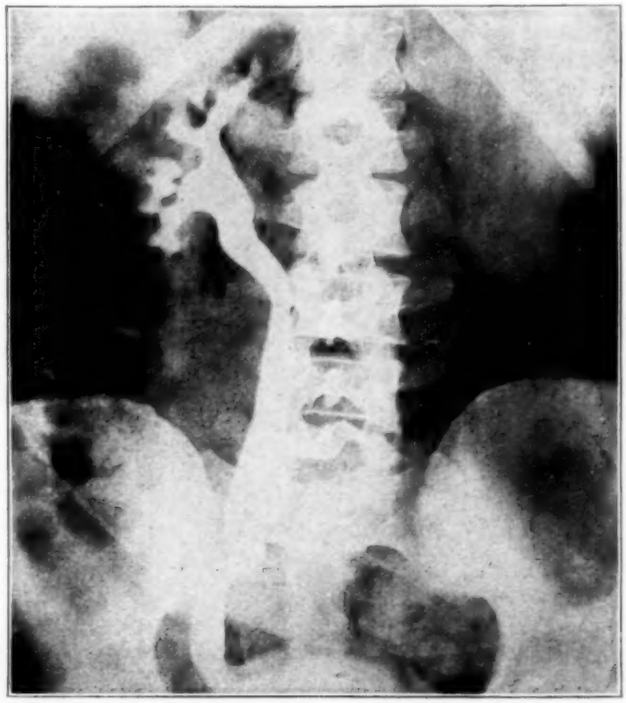

Fig. 4.—Marked ureterectasis extends as far as the ureteropelvic juncture. Above this the pelvis and calices are small and practically normal.

PROGNOSIS AND RESULTS OF TREATMENT

It has been our custom to inform inquiring patients that we believe from our experience that one third of these patients will recover, another third will be markedly improved, and the remaining third will not be helped by the treatment received. This has been largely borne out by a survey of the cases reviewed.

Of the 251 patients examined and treated during the period from Jan. 1, 1910, to Jan. 1, 1916, we were able to trace 145 patients who were treated ten years or more ago. Of this number, 101 are still living and forty-four are dead. Of the 101 living patients, forty-one described themselves as quite recovered from the infection, twenty-eight are markedly improved, and thirty-two are little, if at all, improved. While it is true that recovery from previous symptoms does not necessarily indicate freedom from infection, it is strong presumptive evidence of cure, particularly when it is considered that treatment was completed ten years or more ago and that the average duration of symptoms before examination was six years. It is also remarkable that the patient's general condition was reported as good in fifty-nine cases, as fair in thirty-six, and as poor in only six. It should be noted that in seventy-two cases the treatment was not as thorough as that now employed. It is interesting to compare the end-results in the cases in which little or no treatment was given. Of the twenty-nine patients in this group there were eleven who reported no improvement. Of the forty-four patients who were reported as having died, sixteen died from evident renal disease. The average age was 58 years and the average duration of the disease before death sixteen years. The severity of infection was graded as mild or moderate in fourteen. Of the remaining twenty-eight patients, ten died from other causes and eighteen from causes unknown.

Although it might be inferred that the disease is probably self-limiting in many cases, nevertheless the various forms of treatment have undoubtedly succeeded in increasing the percentage of patients cured and improved. In reviewing the types of treatment employed, it is difficult to draw any exact conclusions, since in most cases various methods of treatment were combined in order to insure results. The percentage of cures following several methods of treatment was apparently about equal. It is evident, however, that those patients in whom foci of infection were removed as a group fared better than those in which this was not done.

When the infection has permeated the entire renal substance and cicatricial changes in the ureteral and pelvic walls are advanced, it is self-evident that the difficulties of recovery are greatly increased. It would seem logical to assume that the best opportunity to eradicate urinary infection would follow if in the early stages of infection (1) all foci of infection were removed; (2) the infection and the resulting cicatricial changes in the ureter and pelvis were treated by means of lavage and possibly dilation, and (3) fluids and urinary antiseptics were used, even though no internal medication has yet been advanced that offers permanent recovery from chronic renal infection. These patients should be persistently treated in order to eliminate the infection as completely as possible.

Nature of Fundamental Research.—Fundamental research is concerned purely with the scientific interest of the matter, practical research with the application of science to medicine or industry. One cannot always keep the two apart. I do not propose to argue which of the two types is higher or better. Certainly I do not wish to condemn practical research because it is practical, but I would urge you not to pour your contempt on those who find greater fascination in the study of what, at the moment at least, appears to be merely of scientific interest; for no one can foretell when the fundamental research is going to point the way to practical developments.—Bigger, J. W.: *Irish J. M. Sc.* **6**:21 (Jan.) 1927.

IDENTIFICATION BY COMPARISON OF ROENTGENOGRAMS

OF NASAL ACCESSORY SINUSES AND MASTOID PROCESSES

WILLIAM LEDLIE CULBERT, M.D.
AND
FREDERICK M. LAW, M.D.
NEW YORK

The case here described is the only one on record in which identification of an individual has been obtained through the use of roentgenograms of the pneumatic cells of the skull, or indeed of roentgenography at all. We had often considered the possibility of identification by comparison of roentgenograms of the nasal accessory sinuses, but had never had the opportunity to try out the idea. When we came to look up any possible literature in regard to this subject, we found only one reference, an article by Schüller[1] of Vienna, in which he suggests the identification of skulls by comparison of roengten-ray plates of the frontal sinuses with plates formerly taken, in emergency medicolegal cases and in criminal anthropometry. When the problem of this case was presented, we knew nothing about Schüller's recommendation, but we put our own theories and, inadvertently, Schüller's also, to the test, and found that they work. We have amplified Schüller's recommendation by using roentgen-ray plates not only of the frontal sinuses, but of all the accessory sinuses together with the sella turcica, and perhaps, more important still, of the mastoid process with its air cells.

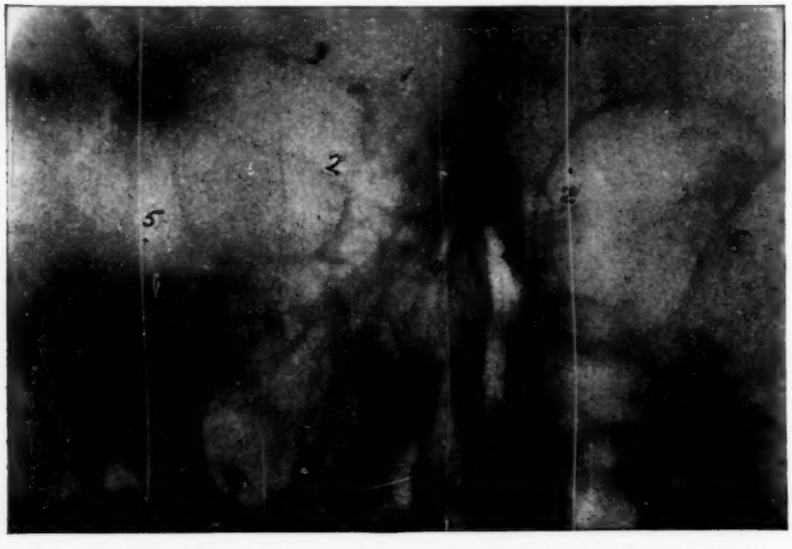

Fig. 1.—Anteroposterior view of the nasal accessory sinuses of the known J. L., taken in 1918.

The following history of identification of a body is as strange and romantic as that found in any novel, but the medicolegal aspects of the case, as well as the personal ones, were most serious and urgent.

In an article[2] entitled "Headache and Chronic Mastoiditis," written in 1922, the case of J. L., operated on for left-sided mastoiditis in January, 1920, was discussed and some reference was made to the roentgen-ray observations. This patient, who had been greatly troubled with headache, was relieved after the mastoid operation and continued in good health for the next five years. In 1925, he went to India and wrote to his family of his intention of going into Thibet; as entry was forbidden by the Indian government, he stated that it would be necessary for him to "disappear"; i. e., to drop officially out of sight. In the meantime he gathered his caravan together and encamped temporarily with some friends on the banks of the Indus River in Kashmir. June 8, 1925, great alarm was occasioned by his sudden disappearance, and search was started along the river. Seventeen days later, the bodies, first of one white man, and then of another, both badly dismembered and disfigured beyond any possibility of recognition, were found in the river, 70 miles below camp. We were appealed to by the family for possible means of identification and suggested the scar of a simple mastoid operation on the left side. The first cablegram from India described a body with the scar of a radical Schwartze-Stacke operation, and this body was consequently rejected. A second cablegram described the other body as bearing the scar of a simple left-sided mastoid operation, and on the strength of this scar alone, after prolonged correspondence between the United States Department of State and the Indian government, which does not permit a body to be shipped out of the country uncremated, the body finally arrived, hermetically sealed in a freight steamer direct from India, and was brought to the New York morgue, Feb. 23, 1926, 260 days after the disappearance of J. L., in June, 1925. Naturally, however, the mere fact of the presence of a body bearing the scar of a mastoid operation did not carry conviction of identity either to a family unwilling to be convinced or to the lawyers of an estate.

The case possessed a decided medicolegal complication, since J. L. was heir to much real estate to which title could not be given without positive identification, which was made increasingly necessary because of the written statement of J. L. to his family of his intention to "disappear" into Thibet. After the arrival of this body, we were again appealed to, this time for any means of positive identification. The body which had arrived at the morgue was a terribly disfigured, mutilated, mummified object, with one arm torn off and hardly any flesh left over the facial bones or the bones of the remaining hand, but still showing the scar of a simple mastoid operation. On being asked if we could furnish means of identification, we replied unhesitatingly that we could do so, for we still held in our possession roentgenograms of the nasal accessory sinuses and of both mastoid bones of J. L., taken by one of us (F. L.) in 1918. We had noted in many other cases what all otorhinologists must have noted: the absolute identity of roentgen-ray pictures taken of these structures, in the same patient, after lapses of five, ten, fifteen or more years. Although we had never before had occasion to use the fact, as shown by roentgenograms, of the unchanging shape, size, contour and

1. Schüller, Arthur: Das Röntgenogram der Stirnhöhle: Ein Hilfsmittel für die Identitätsbestimmung von Schädeln, Monatschr. f. Ohrenh. **55**: 1617-1620 (Nov.) 1921.
2. Culbert, W. L.: Headache and Chronic Mastoiditis, M. Rec. **101**: 486-489 (March 25) 1922.

relation to neighboring structures of the pneumatic cells of the skull as a means of personal identification, these facts could unquestionably so be used. Accordingly, our plan of identification was to take roentgenograms of the frontals, ethmoids, sphenoids and antrums and of the mastoid processes, of the body at the morgue, at similar angles to those taken of J. L., in 1918, to

Fig. 2.—Anteroposterior view of the nasal accessory sinuses of the body brought in from India for identification, taken in 1926.

compare the new roentgen-ray plates with the former ones of J. L.'s head, and to sum up their likenesses or differences.

It is, of course, essential that a second set of roentgenograms made for the purpose of comparison should be made at approximately the same angle as the first set of plates, so as not to distort the outline of the sinuses; but even if the angle varies slightly, an expert in the anatomy and roentgenography of the sinuses and mastoids can compensate for a slight change in angle.

The report by one of us (F. L.) of the comparison of the roentgenograms taken at the morgue with a portable roentgen-ray machine and those taken of J. L., in 1918, is as follows:

The following numbers correspond to similar numbers in the anteroposterior views:

1. Representing the frontal sinuses. The right is smaller than the left, and they are separated by a wide partition. The shape is similar in the two examinations.

2. The nasal wall of the orbits. The greater curve is on the right, and the lesser curve on the left.

3. There is a slight flattening of the superior wall of the right orbit, and a regular curve on the left.

4. The shape of the sphenoid sinus as viewed on the anteroposterior view is triangular in each plate, and the same irregularities in contour are visible.

5. The line representing the border of the sphenoid bone is slightly curved on the left. This is usually a straight line.

6. There is a small cell in the crista galli which is not a frequent occurrence.

The following numbers correspond to similar numbers in the lateral views:

7. The lateral view of the frontal sinuses shows them to be of similar shape, with a deep anteroposterior diameter at the superior margin and a shallow anteroposterior diameter in the floor.

8. There is a small circular shadow in the nasal crest indicating a separate cell. This does not occur in all skulls.

9. The anterior wall of the frontal bone is fairly thick above the frontal sinus. Both plates correspond.

10. The shape and size of both antrums correspond in the two plates.

11. The sphenoids are small and circular on the lateral view, and located well forward. These usually extend back under the sella turcica. They correspond on the two plates.

12. The flattening of the floor of the sella turcica shows on both plates. This is usually a regular curve.

13. The posterior clinoid processes are of similar size and shape.

The following numbers correspond to similar numbers in the mastoid views:

14. The left mastoid shows cell structure on the first plate, while the second does not show cells but has a postoperative appearance. We know that the left mastoid had been operated on during the interval between the first examination in 1918 and the last in 1926.

15. In the right mastoid there is a clear cut circular cell just below the lateral sinus of the brain similar in size and position on the two sets of plates.

16. The right lateral sinus of the brain is fairly well back in both plates. The position of the lateral sinus varies in different individuals. The general direction of the sinus is perpendicular in both plates.

17. The line of the tegmen tympani is well curved in both plates. This line also varies in different individuals.

18. There is a large cell of similar shape just across the knee of the sinus in each plate.

19. There is a fair sized cell in each plate with a thicker wall than the other cells. This is unusual.

20. There are cells extending forward into the zygoma, and over the glenoid cavity. This is not unusual, but in this case

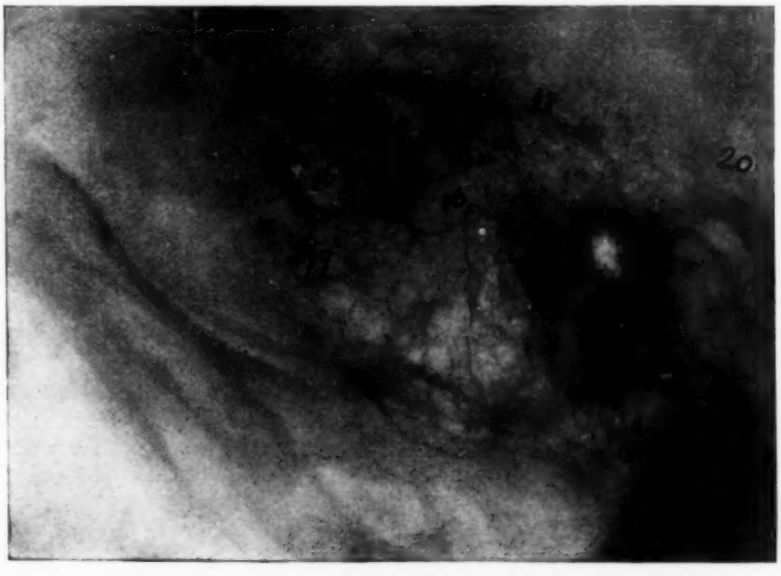

Fig. 3.—Right (normal) mastoid of the known J. L., taken in 1918.

the size and shape of the cells are similar in the two examinations. This is especially noticeable in the cell directly under the numeral 20.

In addition to the identification by roentgenograms, we have had the added satisfaction of the corroborative evidence of the dentist, Dr. A. R. Starr, Jr., who recognized three gold inlays in the teeth of the body at the morgue as those he had placed in J. L.'s teeth in 1924-1925.

COMMENT

In considering the subject of anthropometry by roentgenograms of the pneumatic cells of the skull, we know that all otorhinologists must have been impressed with the individuality of the nasal accessory sinuses and the mastoid cells, in every operative case, long before the introduction of roentgenography. Observation of thousands of roentgen-ray plates has confirmed and increased our knowledge of the difference in size, shape, position and relation to surrounding structures of the nasal accessory sinuses and mastoid processes, in every individual. Schüller says that there would hardly be two men, roentgenograms of whose frontal sinuses would correspond, and he is willing to base identification on these sinuses and their relation to surrounding structures alone. When, however, we add roentgenograms of the other accessory sinuses and of the mastoid processes, we have a long list of landmarks for making positive identification.

Roentgenograms of the nasal accessory sinuses and of the mastoids have also confirmed our knowledge of the lifelong permanence of the contour of the bony structures in an adult person; plates taken at intervals, say, of a decade each, from 20 to 70 would show practically the same throughout a lifetime. Of course, as Schüller states, allowances must be made for growth of the sinuses in juveniles, a condition we are not here considering; also possible rarefaction and thinning of bone must be accounted for in aged persons; while, at any time, changes in the shape or character of the bones due to an infective or inflammatory process must be allowed for. Identification is best made, as in the case here reported, by comparison of parts unaffected by operation, injury or disease. The total absence of any of the structures in question, as a frontal sinus, or cells in the mastoid process, is merely a further identifying mark.

Fig. 4.—Right (normal) mastoid of the body brought in from India for identification, taken in 1926.

Anthropometric roentgenography for identification is a subject that has barely been touched; the literature furnishes only four references suggesting its use. As stated above, this case so far as we know is the first application made of this method. The New York Police Department, the great insurance societies, and the library of the New York Bar Association could not furnish cases in any way similar.

Criminal identification has relied almost entirely on finger printing. This is a method of only relative reliability, since the cutaneous ridges can be accidentally or wilfully spoiled by various scarrings, and even the bones of the finger tips and the nails can be partly changed with criminal intent. The finger printing method is greatly improved by Béclère's suggestion[3] to take roentgenograms of the thumb; the negatives are fixed, so that in addition to the least details of the structure of the skin there is a view of the skeleton and the outline of the nail, thus introducing two new factors into identification measurements.

However, the use of finger printing for criminal identification has made this method repulsive to the public, which resists any attempts at general identification. Furthermore, in cases of accident, the head or parts of the head seem, generally speaking, to be more often recovered than the hands. In the case here reported, one of the arms had been torn off by contact with rocks in the rapids, while the flesh had almost been denuded from the remaining hand; yet the bony structures of the head, with the exception of a few missing teeth, were intact.

For these various reasons, it would seem well to favor roentgenograms of the pneumatic cavities of the skull for purposes of identification. If such roentgenograms had been taken, for example, of men going into war, there would have been far fewer bodies of unknown soldiers, since identification would be possible from mere fragments of the anterior or lateral skull. For example, given a portion of the pneumatic skull, as one of the mastoid processes or the ethmoid capsule or, as Schüller states, the frontal sinuses, or, as we believe, even one frontal sinus, and an undoubted identification could be made. The skull bones have the advantage, also, over the finger tips in that any amount of deforming surgery cannot destroy all their identifying landmarks.

The case here reported establishes a medicolegal precedent, since the identification made by comparison of the roentgenograms of the head of the known J. L. in 1918 and those made of a hitherto unidentified body at the morgue in 1926 was accepted as positive by the lawyers of J. L.'s family estate. In taking roentgenograms for use over an indefinite period of time, it is necessary of course to treat them so that they shall become imperishable records.

The field of anthropometric roentgenography, although almost untouched, is obviously a very important one, both as a record of general identification and in criminal identification.

114 East Fifty-Fourth Street.

3. Béclère, N.: La radiographie anthropométrique du pouce, Compt. rend. Acad. d. sc. **167**: 499-500 (Sept. 30) 1918.

Definitions.—To advance in knowledge, we must not only observe accurately, but we must define and we must classify. If our definitions are confused and vague or our classifications invalid, we may conceal from ourselves the realities with which we think we are dealing.—Clarkson, R. D.: *Edinburgh M. J.*, January, 1927.

Clinical Notes, Suggestions and New Instruments

AN IMPROVED OPERATING PROCTOSCOPE

RUDOLPH V. GORSCH, M.D., NEW YORK
Instructor in Proctology, New York Polyclinic Medical School and Hospital

Several improvements have been made in a Yeomans' proctoscope to facilitate operative proctoscopic instrumentation and particularly to simplify and broaden the scope of surgical endothermy, when these are indicated, in the treatment of such conditions as rectocolonic neoplasms, ulcerations and strictures.

The improved proctoscope has been enlarged to a 1½-inch inside diameter, and is 8 inches in length. Anesthesia is obviously necessary in using a proctoscope of these dimensions.

Along the lower wall of the proctoscope a one-fourth inch tube has been introduced extending to within three-eighths inch of its distal end, and projecting one-half inch beyond the proximal end (fig. 1, *A-B*). This tube is particularly designed for suction removal of smoke produced during surgical endothermy and cauterization. A tonsil suction apparatus serves this purpose admirably. This tube can be used also for inflation if desired. Its proximal end is corrugated for the reception of a rubber tube.

LIGHT CARRIER

I consider the Yeomans' proctoscope a very practical and simple instrument, particularly for instrumentation, but it has been my experience that the light carrier is apt to be inadvertently turned during operative manipulation, thus interfering with the source of the light. It has also been found necessary heretofore to remove the light carrier from its tube before introducing the proctoscope or in replacing the obturator.

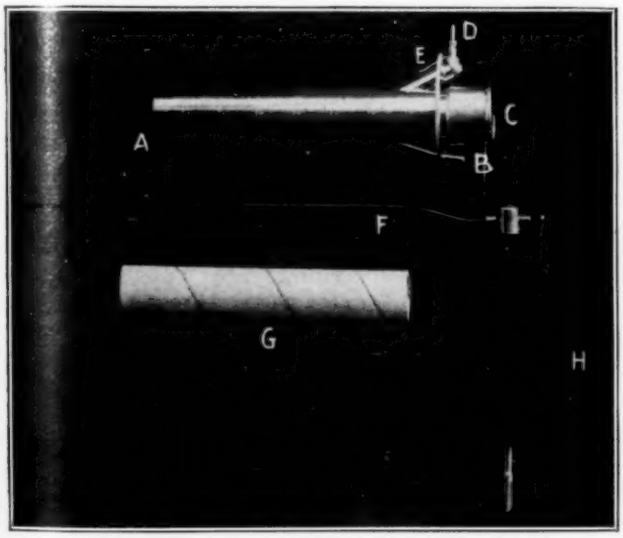

Fig. 1.—*A*, distal end of suction tube, inside the proctoscope; *B*, proximal end; *C*, eye piece (the size and length should be noted); *D*, light carrier in the "in" position, ready for use; *E*, clip; *F*, offset; *G*, bakelite tube, black inside; *H*, electrode handle.

These minor difficulties have been overcome by an indented clip incorporated in the carrier. The clip slides in a grooved notch directly over the center of the light carrier tube and allows the carrier to be partially withdrawn and held in this position without interfering with the introduction or removal of the obturator or during instrumentation. It also prevents the light carrier from turning, anchoring it in its proper axis in all positions. Even though the proctoscope should be inverted, it is impossible for the carrier to fall out from either the "in" or "out" positions.

The eyepiece has been lengthened, to keep the operator's face at an appreciable distance from the patient's buttocks. It has also been made slightly larger than the inside diameter of the proctoscope and may be readily disjointed for the introduction of lenses of different focal lengths (fig. 2).

To obviate the glare from the metallic tube, there is a bakelite insert tube, jet-black on its inside, shown in figure 1.

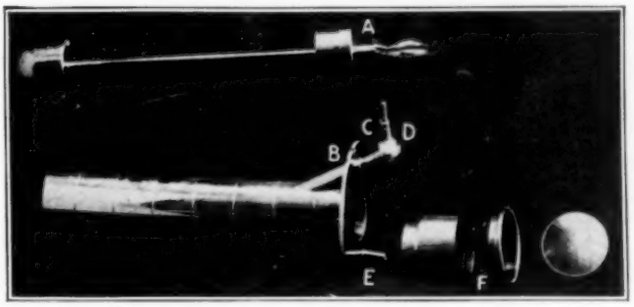

Fig. 2.—*A*, obturator; *B*, grooved notch; *C*, clip; *D*, light carrier in the "out" position, held securely by clip; *E*, suction tube; *F*, eye piece disjointed.

A convenient electrode handle which I have found very satisfactory because it keeps the hand out of the line of vision and an insulated electrode with an offset for the same purpose are also shown in figure 1.

253 East Eighty-Sixth Street.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

COD LIVER OIL (See New and Nonofficial Remedies, 1926, p. 118).

Viking Palatable Cod Liver Oil.—Cod liver oil containing 0.2 per cent of benzaldehyde. Its fat soluble vitamin A content is such that 0.002 Gm. per day is sufficient to initiate growth in the albino rat.

Dosage.—2 cc. (30 minims) twice daily for infants; 4 cc. (1 fluidrachm) three times daily for adults.

Manufactured by Alv. Jensen, Oslo, Norway (Sigurd E. Roll, Chicago, distributor). No U. S. patent. U. S. trademark 216768.

Viking palatable cod liver oil is mixed with chloroform and a few drops of strong sulphuric acid added: the sediment has a dark violet or brownish color.

Young albino rats are fed on a diet deficient in vitamin A (with casein as the protein ingredient) until growth, as indicated by the graphic record of gains in weight, ceases; then the diet receives an addition of viking palatable cod liver oil in amounts to induce a resumption of growth: not more than 0.002 Gm. per day are required.

ANTIRABIC VACCINE (See New and Nonofficial Remedies, 1926, p. 341).

United States Standard Products Company, Woodworth, Wis.

Rabies Vaccine-U. S. S. P. (Semple Method).—An antirabic vaccine prepared according to the general method of David Semple (phenol killed). The brains of rabbits killed after inoculation with fixed virus rabies are placed in a bottle containing beads and 1 per cent phenol solution. The bottle is thoroughly shaken, the resultant emulsion passed through a 100 mesh screen, and sufficient 1 per cent phenol solution added to yield an 8 per cent suspension of brain substance. The emulsion is incubated at 37 C. for twenty-four hours and then diluted with an equal volume of physiological solution of sodium chloride so that the finished product contains 4 per cent of brain substance in 0.5 per cent phenol. Marketed in packages of fourteen syringes, each containing 2 cc. The content of a syringe is administered daily over a period of fourteen days.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Five dollars per annum in advance

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, MAY 21, 1927

THE TREATMENT OF EPILEPSY

For some time, considerable attention has been devoted in this country to the therapeutic possibilities of prolonged fasting in the treatment of epilepsy. Favorable results so far as the suppression of the characteristic epileptic attacks is concerned were reported in 1921 by Geyelin.[1] Obviously the withholding of food can at best become only a transient method of treatment; consequently efforts have been directed to ascertain what changes in the organism incident to inanition might account for its effect in ameliorating the symptoms of epilepsy. One of the metabolic peculiarities accompanying fasting is the accumulation and excretion of aceto-acetic acid and its products, beta-hydroxybutyric acid and acetone. A similar ketosis occurs in diabetes when the oxidation of sugar is sufficiently depressed, and may be provoked in nondiabetic subjects by diets in which the proportion of carbohydrate and protein are sufficiently restricted. Wilder[2] suggested that such diets might offer a method of treatment for epilepsy that would equal or surpass in effectiveness the fasting procedure, and prove to be more practical because it could be continued for longer periods. Precisely how ketosis, if that is the responsible factor, can modify the epileptic seizures remains to be ascertained. It has been suggested that one of the ketone substances, aceto-acetic acid, can somehow exert some anesthetic action in the body and thus suppress the attacks as chloroform is known to do. Peterman[3] has pointed out, however, that it is not practical to attempt a ketosis by feeding or injecting aceto-acetic acid, because the organism easily converts this substance into nontoxic materials. The only practicable method, he states, of securing a sufficient accumulation of aceto-acetic acid in the nondiabetic body is to restrict carbohydrate metabolism, either by starvation or by a diet containing a minimal amount of carbohydrate.

Ketosis is not the only metabolic change characteristic of starvation. A series of studies[4] at the Massachusetts General Hospital has elucidated the clinical and chemical results observed in fasting epileptic children. The main conclusions are that during fasting the epileptic attacks are stopped; some time after the fast is broken they recur again; during fasting there is an increased blood uric acid concentration, a lowering of the blood sugar, a slight lowering of the p_H of the blood, diminution of the carbon dioxide combining power and a marked excretion of acetone bodies, shown qualitatively in the breath and urine. It was also seen in these cases that there was no change in the blood nonprotein nitrogen and amino-acids.

From the biochemical statistics now available it is apparent that a true acidosis as well as a ketosis actually occurs during the fasts. Instead of enforced inanition the Massachusetts pediatricians have employed the highly ketogenic diets that were suggested by Wilder[2] and Peterman;[3] coincident with the resulting marked ketonuria, a reduction or a cessation of the epileptic attacks has occurred. It has been found possible by apportioning the ketogenic elements (fats) in large excess over the antiketogenic factors (carbohydrates and proteins) in the diet to keep children in a state of ketosis over long periods. According to Talbot and his co-workers[4] the production of a ketosis by diet gives the greatest promise of improvement of any method as yet devised in the treatment of epilepsy of childhood.

THE POINT OF VIEW IN INTERNAL MEDICINE

Since the time of Hippocrates and the development of the ancient Greek cult of eclectics, systems have been the curse of medical progress. The development of all-or-nothing policies as to the cause and cure of disease represent extremes far removed from the open mind and the rationalization that are the marks of true science. Such policies are, however, not to be confused with the development of a point of view. Frequently the ability to consider a problem from a new aspect leads to increased knowledge and opens the way for productive research. A recent conspicuous example is the discovery of insulin, followed rapidly by parathyrin, and the finding of the toxin of the streptococcus of scarlet fever, followed promptly by the discovery of similar toxins associated with streptococci in erysipelas and in puerperal infections.

The German clinician Krehl views with interest the present state of medical practice and is inclined to think that the situation presents a crisis. The relation of the physician to the patient has always been the

1. Geyelin, H. R.: Fasting as a Method of Treating Epilepsy, M. Record **99**: 1037, 1921.
2. Wilder, R. M.: The Effect of Ketonemia on the Course of Epilepsy, Mayo Clinic Bull. **2**: 307, 1921.
3. Peterman, M. G.: The Ketogenic Diet in the Treatment of Epilepsy. Am. J. Dis. Child. **28**: 28 (July) 1924.
4. Hoeffel, Gerald; and Moriarty, Margaret: The Effects of Fasting on the Metabolism of Epileptic Children, Am. J. Dis. Child. **28**: 16 (July) 1924. Shaw, E. B., and Moriarty, Margaret: Hypoglycemia and Acidosis in Fasting Children with Idiopathic Epilepsy, ibid. **28**: 553 (Nov.) 1924. Talbot, F. B.; Metcalf, K. M., and Moriarty Margaret E.: Epilepsy: Chemical Investigations of Rational Treatment by Production of Ketosis, ibid. **33**: 218 (Feb.) 1927.

important feature of internal medicine. With the coming of pathologic anatomy and physiology, particularly with the conception of organ pathology first elaborated by Morgagni, came the tendency to view the disease apart from the patient. Such a view clashed naturally with the conceptions of constitutional or general diseases, and with the consideration of inflammation or fevers involving the entire organism. More recently the psychologic hypotheses promulgated by such leaders as Moebius and Freud have turned thought toward the important causal relations between psychic phenomena and somatic disturbances.

Therapy has likewise been modified by changing points of view. As Krehl points out, the old therapy was based on the ability of the physician to make clinical observations and to do everything possible to aid the *vis medicatrix naturae*. The modern physician may make his diagnosis on the basis of laboratory observations alone and apply treatment leading to a modification of the laboratory evidence of disease. Thus it is conceivable that a physician who observed the blood and cerebrospinal fluid regularly of a patient with syphilis or one of its varied forms might prescribe treatment leading to normality in these fluids, which would be for the good of the patient, although the physician had never actually seen the patient himself.

Such objective studies are a step toward the establishing of medical practice on a strictly scientific basis. Nevertheless they tend to lead away from the consideration of the patient as a living organism, which was the prime feature of earlier medical practice.

In his consideration of the subject, Krehl is inclined to deprecate particularly the looseness of practice which clings too greatly to the older conceptions yet finds its excuse in the discoveries of the present. One of the worst forms, he says, is that of men who believe in their intuition. It is more convenient to rely on this than to make a tedious examination of the patient. In the past, whatever symptoms did not fit into a clear-cut diagnosis were regarded as hysteria. If any one now gets the notion that some of the symptoms may be psychogenic, further examination is considered unnecessary. "Words as substitutes for causal explanations as well as speculative systems," Krehl emphasizes, "are again beginning to play an important rôle. Lability of proteins is one of the most abused phrases. Many scientists believe that they have said something definite when they have classified a phenomenon as a colloidal process, a tendency, diathesis or peculiarity of the cells. The p_H is a favorite explanation for something not quite understood, as is also a general hint about the internal secretions."

Every competent observer realizes that medicine is still far from being an exact science in the sense that physics, chemistry and bacteriology are exact sciences. The wise man does not discard the accomplishments of the past for unaccomplished hopes of the future. Krehl feels that the present crisis in medical thought is due to the realization that many physiologic observations merely parallel the old medical view instead of uniting with it. Fusion must be the aim. The physician must recognize the influence of the mind on the body, and try to find the exact significance of the so-called will to live. The fact that one patient may be completely disabled whereas another with the same objective signs and symptoms is able to recover because of some variation in personality has long been recognized by the experienced clinician. Understanding or explanation of this phenomenon is not yet available. These questions should not be shunned as problems for the mystic, but the solutions should be conscientiously sought, because only by such understanding will medicine advance further.

IMMUNOLOGICALLY SPECIFIC POLYSACCHARIDES

Immunologic reactions have been described by Wells [1] as the processes by which the living organism defends itself against the chemical attacks of its enemies and so is able to exist in an environment seething with such enemies. In these chemical reactions, the reagents involved are substances endowed with active chemical properties, and they are the product of chemical activity of the tissues of the body. In few if any cases is the chemical constitution of either the poison of the parasite or the defensive agent of the host known, and knowledge, Wells adds, is gained entirely by observing the reaction or the effects resulting from the reaction.

Heretofore substances with immunologically specific properties have generally been supposed to be derived from proteins. Antigens, that is, substances which, introduced into the tissues or circulating fluids of an animal cause the appearance in these fluids, sooner or later, of substances which react specifically with the antigenic substance, seem always to be large colloidal molecules. In general, all soluble proteins are antigenic, some doubt prevailing as to whether anything except protein molecules can serve as antigens. The antibodies produced by antigens may exhibit a variety of properties, such as are represented by precipitin reactions, agglutinin reactions, and lysis. Although antibodies have not yet been isolated, it is generally held that they too are proteins. They are found associated with the globulin fraction of the serum.

Workers at the Rockefeller Institute for Medical Research have directed attention in a prominent way to the rôle of heretofore unidentified carbohydrate substances in certain specific immunologic reactions.[2] In 1917, Dochez and Avery showed that whenever pneumococci of type I, II or III are grown in fluid

1. Wells, H. G.: The Chemical Aspects of Immunity, New York, Chemical Catalog Company, 1925.

2. A review of these investigations has recently been published by Heidelberger, M.: Immunologically Specific Polysaccharides, Chem. Reviews 3: 403 (Feb.) 1927, from which many of the statements above are taken.

mediums there is present in the cultural fluid a substance that precipitates specifically in antipneumococcus serum prepared by injection of animals with a strain of the homologous type. This soluble substance was demonstrated in culture filtrates even during the initial period of rapid multiplication when little or no cell death or disintegration is occurring. Examination of the blood and urine of experimentally infected animals gave proof of the presence of this substance in considerable quantities in the body fluids, showing that this soluble material, elaborated at the focus of the disease, readily diffuses throughout the body, is taken up in the blood, passes the kidney, and appears in the urine unchanged in specificity. Similarly, a study of the serum of patients suffering from lobar pneumonia revealed a substance of like nature in the circulating blood during the course of the disease in man. Furthermore, examination of the urine of patients having pneumonia due to pneumococci of types I, II and III showed the presence of this substance in some stage of the disease in approximately two thirds of the cases. The specifically reacting substance has already been isolated in sufficient quantities to give assurance of its polysaccharide character. The soluble specific substance of type II pneumococcus is apparently identified with a weakly acidic, nitrogen-free polysaccharide made up chiefly of glucose units. The carbohydrate complexes of the other two pneumococcus types are distinctly different. Heidelberger reports that the three polysaccharides do not contain sulphur or phosphorus and differ from the starch-glycogen group of carbohydrates in their acid properties, in not giving color with iodine, and in their resistance to the ordinary carbohydrate-splitting enzymes. Each substance breaks down on hydrolysis into reducing sugars, a part of which, at least, is peculiar to itself. The type I substance differs sharply from the other two in containing nitrogen and in possessing basic as well as acidic properties, while of the other substances, the type II is a dextrorotatory weak acid and the type III a levorotatory strong acid. Especially striking, Heidelberger adds, is the occurrence of specific substances of such widely differing properties in micro-organisms as closely related as are the three fixed types of pneumococcus.

The discovery of the different carbohydrates elaborated in a specialized way by multiplying pneumococci is destined to contribute greatly to the ease of type differentiation and diagnosis. Further speculation on the rôle of the newly separated substances in the life of the respective micro-organism is engrossing. Heidelberger points out that the pneumococcus is an encapsulated organism, and there are grounds for the belief that the ectoplasmic, or outer, layer of the cell is composed of carbohydrate material which is identical in all its biologic characters with the type-specific substance. On the other hand, the endoplasm, or somatic substance, consists largely of protein that is species, and not type, specific. This protein is possessed in common by all pneumococci, while the carbohydrate is chemically distinct and serologically specific for each of the three fixed types. The cell, therefore, may be conceived as so constituted that there is disposed at its periphery a highly reactive substance on which type specificity depends. If, then, Heidelberger concludes, final proof is brought for the conception that the capsular zone of the organism is largely composed of this carbohydrate substance, is part of the defense mechanism of the cell, and is the site of its initial contact with antibody, then these soluble bacterial polysaccharides acquire new significance not only in the serologic reactions of the cell but also in the actual processes of infection and immunity in the host. In any event these investigations represent a determined effort in the direction of progress toward a better understanding of the nature of bacterial behavior in living organisms.

Current Comment

QUESTIONNAIRES

The open season for questionnaires is again upon us and they are being shot at various parts of the country in alarming numbers. A physician from Ohio recently shot a questionnaire on cysts of the ovary that was more than twenty questions long, considered a record for this type. A questionnaire observed in Michigan seems to have been of the old appendicitis species. Several trimmed in economic questions have also been noted. The physician who hopes to prepare an essay for some June conference based on the experiences of his colleagues and on the use of a tabulating machine finds a pet questionnaire a delightful adjunct to the office. But it is not fair to let these pets grow too large. Otherwise when they go visiting some outraged friend may tear them to pieces and then they will never come home.

THE OCCURRENCE OF ZINC IN MAN

Until quite recently the finding of chemical elements, other than those commonly present in living tissues, in the excreta of man was likely to be interpreted as a sign of something unusual. The demonstration of iodine as a constant, normal constituent of the organism, notably in the thyroid structures, represented the addition of an unexpected novelty to the composition of the body. Of late the question has occasionally been raised as to whether small quantities of other elements once regarded as foreign do not in fact exercise beneficent rôles. Arsenic, manganese, copper and zinc, for example, have been discussed from that standpoint. The problem has become complicated by the discovery that such elements are common contaminants if not actual components of many substances that enter into the dietary; consequently they are ingested unwittingly if not intentionally. The examination of excreta for evidence of harmful metallic elements in the body thus may yield results that are

difficult of interpretation from a toxicologic standpoint. This is well illustrated in the case of zinc. Some common foods, such as the oyster, may be exceptionally rich in the element, and it is present in most specimens of market milk. A recent study at the Harvard School of Public Health by Drinker, Fehnel and Marsh [1] on a large number of healthy adults subsisting on an ordinary mixed diet showed daily outputs of zinc as high as 2 mg. in the urine and 20 mg. in the stools, with corresponding averages of 0.9 mg. and 10 mg., respectively, daily. Ingestion of foods particularly rich in zinc may result in what the Boston investigators describe as "amazing" increases in fecal zinc. The renal output is not comparably augmented. In the case of a workman, a daily fecal output of nearly 200 mg. was reached—a figure higher than that observed heretofore for the feces of workmen exposed to zinc.[2] The ubiquity of zinc has thus presented unexpected difficulties for the students of industrial hygiene. As Drinker [1] and her associates remark, obviously the finding of unusual amounts of zinc in the urine and feces of men exposed to zinc industrially has no very great diagnostic significance as evidence of poisoning, if the normal zinc content of urine and feces can be readily and markedly increased at will by changes in diet.

THE CAUSE OF PULMONARY EMBOLISM

Recently two studies on the cause of pulmonary embolism, one statistical, the other bacteriologic, have thrown new light on this serious postoperative complication. Lister [3] selected for his study those cases which came to necropsy at the London Hospital following an operation and compared them with records taken at random from 4,000 major operations. One hundred and ninety-five fatal pulmonary emboli were found following operation and twelve following fracture. This study did not indicate that sepsis exerts any influence in causing massive embolism; there was no undue rate of incidence among the operations in which powerful retractors were used; nor in nephrectomies or Halsted's amputation of the breast, in which much thrombokinase is liberated. The effect of such factors as vomiting, purging, hemorrhage and shock could not be determined, they varied so greatly. There was a marked increase in the incidence of embolism among two groups in Lister's tabulation: the older age groups and those who had an incision through the anterior abdominal wall, whatever the ultimate object of the operation was. Since diaphragmatic respiration plays a great part in maintaining circulation in the large abdominal veins, it is suggested that the inhibition of diaphragmatic respiration accounts for the comparatively high incidence of embolism following abdominal operations. The bacteriologic study of the cause of pulmonary embolism was made by Rosenow.[4] From the emboli in each of six recent fatal cases he isolated a gram-positive diplostreptococcus that resembled the pneumococcus in size, shape and grouping. A cultural study was then made of pulmonary emboli that had been preserved in solution of formaldehyde since 1925. In none of these twenty-five cases had there been septic fever; in eighteen there was an abdominal operation; twelve of the patients were less than 50 years of age; in six no operation was performed. In all but two of the twenty-five preserved emboli, Rosenow states that he found a diplostreptococcus identical with the one isolated from the series of six recent cases. With four strains of this diplococcus, attempts to produce thrombosis in laboratory animals were successful. Rosenow believes that the diplostreptococcus which he isolated is the common cause of massive thrombosis leading to pulmonary embolism, and that stasis is not a contributory factor. These studies, although dissimilar, are so interesting that they will undoubtedly attract others to undertake similar investigations.

1. Drinker, Katherine R.; Fehnel, J. W., and Marsh, M.: The Normal Excretion of Zinc in the Urine and Feces of Man, J. Biol. Chem. **72**: 375 (March) 1927.
2. Batchelor, R. P.; Fehnel, J. W.; Thomson, R. M., and Drinker, Katherine R.: A Clinical and Laboratory Investigation of the Effect of Metallic Zinc, of Zinc Oxide, and of Zinc Sulphide upon the Health of Workmen, J. Indust. Hyg. **8**: 322 (Aug.) 1926.
3. Lister, W. A.: A Statistical Investigation into the Causation of Pulmonary Embolism Following Operation, Lancet **1**: 111 (Jan. 15) 1927.
4. Rosenow, E. C.: A Bacteriologic Study of Pulmonary Embolism, J. Infect. Dis. **40**: 389 (March) 1927.

ARE PREGNANCY AND PARTURITION NORMAL FUNCTIONS?

For some fifteen years Dr. Joseph B. De Lee has been urging the point of view that the function of child-bearing, while it may have been intended by nature at the beginning as a harmless process, has become, in the modern civilized woman, an event in which many factors may be pathologic. The topic formed the subject also of a statement presented last year before the congress held in Dublin as a part of the Coombe centenary celebration. If the ovum is considered an endoparasite with which the host must live in symbiosis for nine months, and if it is realized that the impregnated ovum brings into the body of the host blood qualities not previously there, the student of biology will understand that reactions long since recognized as partaking of pathogenicity take place in the pregnant woman. Studies of the metabolism of the pregnant woman, of her lessened resistance to some infections, for example epidemic influenza, of her increased susceptibility to some other conditions, as hyperthyroidism or goiter, indicate that her body is certainly not the same as in the nonparturient state except for the presence of the fetus. In spite of the best possible care, a large number of women still die or become permanently disabled as the result of childbirth. The estimates of obstetricians as to the incidence of severe pathologic processes in childbirth vary from 10 per cent to the statement accredited to Douglas that "the parous woman, *ipso facto*, is apt to die." If progress is to be made in the attack on the death rate of woman associated with childbirth there must be a revision of "the notorious disappreciation and disesteem of obstetrics" that exists at present.

Value of Research.—The true scientist is constantly insisting on controls. Every variable factor must be controlled if any deductions derived from the experiment are to be of value. This need for controls and the neglect of them by those engaged in clinical medicine afford an explanation of the suspicion with which the laboratory worker regards many of the deductions of his clinical colleagues.—Bigger, J. W.: *Irish J. M. Sc.* **6**:20 (Jan.) 1927.

PROCEEDINGS OF THE WASHINGTON SESSION

MINUTES OF THE SEVENTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT WASHINGTON, D. C., MAY 16-20, 1927

HOUSE OF DELEGATES

First Meeting—Monday Morning, May 16

The House of Delegates convened, and was called to order by the Speaker, Dr. Fred C. Warnshuis, Michigan.

ADDRESSES OF EXECUTIVE OFFICERS

Address of the Speaker, Dr. F. C. Warnshuis

Members of the House of Delegates:

Convened in annual session in the capital of our nation, it occurs to your Speaker that it would be consistent and characteristic if we caused our first official act of this session to be recorded as one in which we convey to the President and through him to the people of this nation a message of greeting and expression of esteem. To that end do I submit for your approval, if so disposed, the following message:

HONORABLE CALVIN COOLIDGE,

President of the United States:

The American Medical Association, representing 94,000 doctors of medicine, convened in annual session, extends cordial greetings to you. We affirm anew the fundamental principles and objects of our profession. We subscribe again our willingness to contribute our services for accredited humanitarian purposes. We pledge a continuance of persistent efforts to unfold the unknown laws of physiology and hygiene and to uncover the causative factors of disease.

We are ever ready to apply approved scientific principles and practices to enhance the health of our people that their vocational and social pursuits may be attended by a minimum of disease and physical incapacity.

In this spirit we convey to you, Mr. President, our greetings and felicitations.

THE AMERICAN MEDICAL ASSOCIATION,
OLIN WEST, Secretary.

In opening your deliberations, your Speaker desires to enumerate anew certain policies that govern our official activities.

REFERENCE COMMITTEES

In making appointments for reference committees, a studied impartial attempt is made to accord recognition to every state of our federacy. Selection is further determined by individual experience in the House as also a delegate's familiarity with the subject matter customarily referred to the committee to which appointment is made. Appointments are determined thirty days previous to our session and selected from certified lists of delegates submitted by our national secretary. The lists of delegates of many state organizations were incomplete because of the lateness of state meetings. Your Speaker had no other alternative than to make appointments from these incomplete lists. In making the announcement of committees this morning I would state that vacancies and absences have been filled by selection of delegates from the amended lists on file May 15. This comment is tendered solely for informative purposes.

Again do I urge that reference committees arrange their hearings to meet the convenience of delegates, and that the hour and place of meetings be given ample publicity. It is further recommended that in considering the business referred to them and in the formulation of reports, policies and recommendations, reference committees avail themselves of the information that is at hand from constituted councils, bureaus, special committees and officers of our Association. Your Speaker assures you that Trustees will gladly respond to the request or call of any committee to supply information on matters in which the Trustees have officially taken action or in which they have recorded opinions and their reasons therefor. It will be apparent that in securing these advisory services, committees will be fully informed and their recommendations will reflect the fullest possible consideration of all obtainable facts. Conflicting or complicating recommendations will thus be minimized.

Delegates are advised to attend and present their arguments, petitions and discussions on all matters of constituent or personal interest and concern at committee hearings. It is greatly to be desired that, when reports are rendered to the House, the discussion be confined to fundamentals so far as that is possible.

ELECTIONS

An amendment will be presented to you to change our order of business of the Thursday afternoon session so that our annual elections will be the last order of business. This amendment is forthcoming by reason of the following observation: It has been noted that as soon as the election is over, many delegates leave the floor of the House and depart for home. Many important reference committee reports, section requests and recommendations are still to be received and action taken. On two occasions barely a quorum remained, and on one occasion hasty and ill advised official action was narrowly averted. To circumvent such a possibility is the purpose of the amendment that is tendered.

SURVEY OF NURSING EDUCATION AND SERVICES

In my Speaker's address at the St. Louis Session in 1922, I pointed out the need of a study of the problem of nursing education and nursing service. The recommendation was concurred in by the reference committee and resulted in referring this problem to our Council on Medical Education and Hospitals. That council appointed a special subcommittee to consider this problem. In that council's annual report, rendered the following year in San Francisco, a brief reference to the subcommittee's activities was appended and approved by the House in a blanket adoption of the Council's annual report. In the Chicago and Atlantic City sessions no consideration was accorded to this subject. At the Dallas session, during one of the sessions of the House, your Speaker drew attention to what seemed to be a forgetfulness of this important question and suggested that a resolution be introduced calling for a new committee that would bring in a definite report. Dr. Harris of New York gave notice of such a resolution and did introduce a resolution calling for the appointment of a new committee by the President and Trustees and assigning this problem to that committee with instructions to report at this session. The Board of Trustees did appoint such a committee, and at one of the regular sessions of the board the committee was enlarged to seven on your Speaker's representation that there should be on that committee members who were in active community and bedside practice and not connected with large hospitals and teaching institutions, so that in the committee's deliberations the problem of the general practitioner might be clearly set forth. That committee is now headed by Dr. Van Etten of New York as chairman. A few months ago it was unexpectedly evidenced that the first committee, appointed by the Council on Medical Education and Hospitals, was functioning but through misunderstanding had not made any report to the Trustees or House of Delegates. It is unfortunate that we are now confronted with two committees considering the same subject, but working at somewhat cross-purposes and submitting two reports for your consideration. I desire to reiterate that the situation is not resultant from lack of good faith and such implication should not be inferred. The entire conflict arose from a misunderstanding. I am quite sure that the good judgment of the reference committee will clarify the condition.

Your Speaker recommends anew that, in dealing with this problem, all surveys, studies and recommendations shall emanate from the American Medical Association and not from any newly constituted independent organization. The problem of nursing education and service is a vital one to the public and to every physician. It is a problem in which we should exert and evidence opinions and recommendations and accomplish their institution. It is a service we owe to the public, to hospitals, to training schools and to our fellow members. The American Medical Association should, yea must, undertake its solution and formulate the resultant principles when they are announced. We become negligent and shirk our responsibilities and forfeit guiding direction if we delegate the task to others.

STANDARDS FOR SURGEONS

I desire to emphasize that the American Medical Association points with pride and justly boasts that it is the first to seek out conditions that lead to reprehensible medical practices. It has continuously sought to maintain its house in order and to anticipate undesirable tendencies for the purpose of circumventing untoward actualities.

The American Medical Association comprises 94,000 of the 140,000 physicians in our profession. In the present trend of events, conditions exist wherein all trades and professions are confronted with enticements to yield to commercial and selfish inducements and to ignore high and lofty principles. Never has it been so easy to go astray. It would not be surprising if the medical profession, in common with all other professions and trades, should reveal 1 or even 2 per cent of its number as having yielded to impinging temptations. Representing 150,000 physicians, 1 per cent would constitute 1,500 physicians, a not inconsequential number. For their omissions and commissions the profession as a whole may be judged and appraised by the unthinking and intolerant. Let us, however, take cognizance of that condition and tendency, increasing our vigilance and action to minimize it to its lowest possible extent.

It is on that premise that your Speaker is constrained to direct your attention to what is more and more becoming a serious problem and on which the public is becoming insistent for enlightenment. I refer to what are or shall be the qualifications and requirements for a man to be classified as a capable, competent surgeon. Under our plan of medical education, by reason of the tremendous increase in the number of all kinds and types of hospitals, because of perfected aseptic methods, and lastly because of the outstanding achievements that can be attained by surgical methods in the hands of competent, experienced surgeons, there is evidence of ill advised, poor and unskilled surgical work being done by undertrained, incompetent men. Hospital boards in smaller hospitals are not in control of the situation, unsupervised private so-called hospitals exist, and the public will suffer unless we institute measures by which to formulate standards that may be employed. Visits to the operating rooms and wards of hospitals and clinics reveal increasing evidence and incidents of ill advised, incompetent surgical work. This is not a general broad indictment. It is a citation of conditions that may expand with potential reprehensible possibilities.

As an association we have assumed and acquitted ourselves in the problem of standardizing our medical colleges. We have appraised and classified these colleges. We have surveyed and designated hospitals where satisfactory intern training is accorded. We have exposed and continue to expose therapeutic fraud and misrepresentation. We have given publicity to the quack and the charlatan and uncovered their methods. Within the year we have undertaken to pass approval on all electrical and physical apparatus in order that dependable, efficient apparatus may be identified. We have outlined certain requirements and standards of fracture treatment. These and similar reforms have received our attention and we are justly proud of the achievements recorded. Has not then the time arrived and are we not obligated, as America's highest authority, to whom the public rightly appeals for guidance and advice, to solve this one momentous question as to the requirements, qualifications and standards that are basic and essential ere one may hold forth as being a capable, dependable, properly trained surgeon and to formulate a means whereby the public may make such identification? I myself believe that however small the evil may be now is the time to dominate the situation. Sincerely, therefore, does your Speaker recommend and urge that by proper action you authorize the appointment of a Commission of Seven to whom this question and problem shall be referred with instructions that a preliminary report be submitted at our next annual session.

HOSPITAL LEGISLATION

All types of buildings have been and are being converted into so-called hospitals. All types of hospital administrative supervision prevail or are wholly lacking. It is not uncommon to find the quality of professional service rendered in these so-called hospitals to be of mediocre or poor standard. Doctors denied admission by standardized hospitals, or whose work is limited in such institutions because of incompetence, induce patients to enter these unapproved hospitals, which are frequently hospitals in name only. It is quite apparent that it is our duty to concern ourselves with this menacing state of affairs. The public is seeking relief from the existent conditions.

Your Speaker recommends that suitable action be taken that will instruct our Bureau of Legal Medicine to draft a bill that can be caused by state organizations to be introduced in their state legislature whereby the standards of hospitals will be outlined, administrative and staff requirements be specified, and supervisory inspection and control instituted. State regulation and license of hospitals is requisite to obviate the present conditions that are expanding, and such action can in no way be construed as inducive to state control of medical practice in the form of state medicine; for we as physicians purpose to formulate the scope and degree of licensiate limitations and specifications.

RESPONSIBILITY OF DELEGATES

It is only proper that attention be called to the responsibility that is invested in each individual delegate. This House is the legislative and administrative body of our great Association. Collectively we reflect the American medical profession and formulate the opinions, policies, activities and pronouncements of American physicians that influence, sway and enlighten the public. Individually we represent the members who form the constituency of the state organization that delegates this trust to us. Acquittal of that trust can be recorded only when a delegate so perceives his obligation and responsibility. Individualism, personal foibles, fancies, likes and dislikes that conflict with the instructions and wishes of your state membership must be subjugated and give way to broad judgment and mature opinions. Personal ambitions and selfish motives reflected in discussion, argument, resolution or vote have no place in these deliberative sessions. The ideals of service, the welfare of all, the absence of sectional communism and the ever recorded desire and zeal to accord to each and every question a persistent and evidenced expression of determination that reflects open mindedness, fairness and the welfare of all should therefore be evidenced by each delegate. In setting forth such a code no implication or accusation is implied or hinted, nor do I convey that other sessions have presented reasons for the submission of these recommendations. I simply seek to state anew the spirit and method that will evoke commendation, command respect and enhance our prestige, individually and collectively, and cause this House of Delegates to hold the confidence of the nation.

CONCLUSION

Finally, please permit me to convey, so far as words can convey or voice express, my sincere and profound appreciation for being permitted to serve you as your presiding officer. More than ever I am deeply moved by this evidenced confidence that you repose in me. More than ever I am imbued with a firm determination to accord to each delegate and this House as a whole unlimited fairness in rulings, and the widest, consistent opportunities for your deliberative and legislative labors, and to reflect compliance with your desires and commands; for I construe myself to be your servant. In that spirit I will strive to merit your approval and exemplify my thanks.

Address of President Wendell C. Phillips

Mr. Speaker, Members of the House of Delegates, and Ladies and Gentlemen:

In closing an administration of the presidency of our Association, it would seem proper that the outgoing president should render an accounting of his stewardship and to outline his ideas as to the Association's duty and prerogatives in promoting the progress of medicine in all its relations.

In my case this date has larger significance, inasmuch as it terminates a period of ten years of official activity in the Association's affairs. During these years we have passed through several periods of stress. We measured up to our responsibilities in the World War; we have solved many problems of dispute regarding policies; we have overcome every measure of obstructive tactics; we have made changes in the personnel of our administrative departments, and we have inaugurated outstanding movements of progress. Furthermore, we have made great progress in every department of our Association's activities. This is particularly noticeable in the marvelous success of our publications, from both a literary and a financial standpoint. This is evidenced by the remarkable growth of THE JOURNAL and HYGEIA.

It is a great pleasure to pay tribute to the able and faithful men who are charged with the business, educational, promotional and literary aspects of our organization.

The unselfish devotion, the painstaking effort, the wise counsel and administrative ability of your trustees is worthy of commendation.

The heads of your administrative departments have proved themselves to be men of marked wisdom and great ability.

Your secretary and general manager, Dr. Olin West, possesses a keen insight, wise judgment, and a high order of organization ability. He has already proved the wisdom of his selection.

The editor of your journals, Dr. Morris Fishbein, trained to his position by long association with our honored editor emeritus, Dr. George H. Simmons, has abundantly proved the wisdom of his appointment to this great office. His brilliant mind, his versatility, his ability to make contacts with various great publications and literary promoters, has proved of inestimable value in establishing our Association as the fountain head of information in the realm of medicine, hygiene, sanitation and public health.

The ability of your business manager, Mr. Will C. Braun, is well established and has done much to maintain the remarkable financial status of our Association. No better illustration could be given than to state that through the advertising income the Association has been able to carry on the mass of work that has been attempted for the benefit of the medical profession and for the public good.

The heads of our various councils and bureaus are notable experts in their various administrative offices, and are rendering valiant services not only to the medical profession but to the public at large.

No better tribute could be paid to the wonderful efficiency of our entire organization than to give emphasis to the *esprit de corps* of the four hundred or more people who carry on at headquarters.

It is a pleasure to express keen and sincere appreciation of the courteous treatment accorded me by every department of our Association's activities throughout my two years of presidential service.

THE PUBLIC HEALTH RESPONSIBILITY OF THE PHYSICIAN

In addressing the House of Delegates one year ago, I urged you who are clothed with the responsibility of outlining medical policies to give serious consideration to the subject of public health education. Even at that time there seemed to be a slight awakening of the medical conscience as to the trusteeship of physicians as promoters of individual and community health education. It was urged that physicians only are qualified by heritage, education and experience to teach the public the basic principles of health preservation. Attention was called to the growing demands emanating from the great newspapers, newspaper syndicates, magazines and numerous lay organizations for medical men to enter the field of public health education.

During the year it has been my pleasure and privilege to address many medical and lay organizations throughout the country, and in these addresses I have never failed to give emphasis to the importance of bestowing the leadership of all health movements on the shoulders of scientifically trained medical men. I have urged and pleaded for the dignity and leadership of the qualified family practitioner of medicine. I have urged that all periodic health examinations of every individual should be recorded and filed in the offices of the general practitioners of medicine in every locality. I have also urged that heads of industrial organizations who feel the necessity of such examinations should arrange to have these examinations conducted by the personal physician of the employee.

CONFERENCE ON PUBLIC HEALTH

For several years I have been impressed with the importance of some sort of a "get-together" conference of all national, voluntary and state health organizations for the purpose of discussing the great health problems of our country, the purpose being, first, the development of mutual and better understanding; secondly, team work. The pros and cons of several plans were discussed by the Board of Trustees, resulting finally in an invitation conference of these health organizations, held under the auspices of our officers and trustees at Association headquarters on March 24 and 25, 1927.

It was my pleasure and privilege to preside at this health conference. The program stressed three important topics: first, the relation of the physician to public health; second, public health education, and, third, some phases of the economics of public health. Some quotations from my opening address before this conference would seem to be appropriate for your consideration:

1. We should so construct and conserve our health problems and policies that we may convince the public, which really pays the bills, that no fragments of opportunity are lost or misused.

2. The promulgation of the principles of preventive medicine and health conservation of the public is not a matter of sentiment but of business. Our great industrial organizations succeed because they are founded on sound business principles. This task of ours may be likened to a great national industrial undertaking, and it will involve the expenditure of many millions of dollars. Are we meeting the good business requirements of our great health education cause? Are we building on the broadest, wisest and most comprehensive foundation? Are we sure that our project, even thus far, is being conducted without duplication of efforts or duplication of the expenditure of money?

The address also stressed the preeminent position which should be given to the physician, as the only individual in the community with adequate basic knowledge on which to act in health matters.

The address further recommended that some form of survey should be inaugurated in a manner sufficiently thorough in its ramifications to make positive a basis of knowledge which would serve to guide our future activities. Such a survey should not only cover the work of all the organizations listed under the banner of preventive medicine and health conservation; it should include organized medicine as represented by the American Medical Association and any other medical organizations that attempt public health work; but the survey I have in mind would fail unless it should give full consideration to humanity and humanity's needs. It is my sincere conviction that the program of health education is sufficiently developed to warrant the following statements:

The medical profession should throw off its mask of reticence and its shrinking attitude toward reasonable publicity concerning health education. Professional policies narrowly conceived can never successfully oppose the rightful interests of the public. It is time to strike the shackles not only from the shrinking attitude of the medical profession toward the public espousal of educational programs but also from its attitude toward the lay press, the radio and great assemblies of truth-seeking people. The physician has no

right to conceal from nonmedical readers the great body of news of the highest importance which is his to communicate.

Nearly one hundred health organizations responded to the invitation and were represented at the health conference. This included about thirty-two voluntary health organizations, seventeen state boards or other official agencies, four welfare departments of life insurance companies, as well as the American Medical Association and various medical schools and publications. Altogether, the spirit of the conference was excellent. The papers were efficient and forceful, and those in attendance evinced a strong desire for cooperation. Full stress was given to the important position which the medical man should occupy in all promotive activities of health organizations. In view of the leadership which should be maintained by the medical profession in matters of personal and community health education, and in view of an apparent need of information on the part of a considerable proportion of the physicians of our country, I recommend that the House of Delegates take into serious consideration the question of field health education work, to be promoted and financed by the Association. It is to be hoped that such a movement will eventuate in a department of field activities through which every county society unit of the Association may be organized and become efficient leaders in all local health activities.

In my last year's address I recommended that a survey of public health activities should be inaugurated and financed by the Association. This recommendation was adopted by the House of Delegates, but so far has not been undertaken by the Board of Trustees. I now realize that such a survey properly conducted might involve both time and a good deal of expense; that it should be comprehensive and exhaustive. Such a survey might well be undertaken either as a combination of effort of all health organizations, or as a public function service of some one of our foundations.

I now recommend that the trustees be authorized to use their effort to bring about such a survey. I further recommend that in view of the success of the first health conference, the House of Delegates by vote, both favor and authorize the board of trustees to call such a conference annually for at least another two years.

Health education programs, properly conceived, may of necessity demand legitimate changes in our more or less orthodox views of our attitude toward publicity. The sentiment expressed in my address to the health conference regarding this matter has resulted in wide editorial comment and approval on the part of the leading newspapers of the country.

It may become necessary and advisable to modify some narrow code restrictions of constituent county and state societies in order to meet the rightful educational needs of the public. It is our plain duty to formulate the modes and methods of medical publicity to conform with legitimate health educational programs. One of these demands is that the listener or reader shall know the source of his information. Our radio authorities insist that the name of the broadcaster be known. This is true in business, in politics, in religion and in science, and it should be no less so in health education of the public. A proper system of censorship should be inaugurated to safeguard our publicity problems. Such censorship should emanate from organized medicine. In more general matters whereby great publicity is needed, it would seem wise that the censorship should be that of the headquarters of the American Medical Association. In state matters the censorship should be charged to the responsibility of state medical societies, while in counties and local communities the county societies should assume the responsibility. In no sense should such censorship be permitted to interfere with the legitimate publicity requirements which the subject demands. Nevertheless, individual physicians should be cautioned against personal aggrandizement, or seeking to advance their own personal interests.

MEDICINAL LIQUORS

Under the caption "Shall Congress have Power of Life and Death over the Sick?" a group of medical men, including the Executive Committee of the Association for the Protection of Constitutional Rights, published an article which to me seems worthy of serious consideration not only by this House of Delegates but also by the medical profession at large. I venture to quote a few pertinent statements from this article, and I recommend that the entire article be considered by a reference committee of the House. The article, published in a recent issue of THE JOURNAL, calls attention to a recent decision of the Supreme Court by a majority of five to four "that Congress has power to limit the amount of whisky which a physician may prescribe for a patient to one pint in ten days, irrespective of the physician's opinion as to the patient's needs. . . . Under these decisions . . . Congress has power to decide what is and what is not medicine; Congress may fix by legislative fiat the dosage of remedies contained in the United States Pharmacopeia. And under these decisions, Congress may penalize any physician who dares to oppose his trained judgment to the fiat of Congress. . . .

"Not even the Middle Ages may boast of a greater triumph of legislative imperialism over the methods and achievements of science. Congress included medical restrictions in the Volstead Act in contravention of a promise to the nation by the Senate Judiciary Committee that the use of alcohol as a medicine would not be interfered with. . . .

"In the minority opinion, . . . Mr. Justice Sutherland, citing the case of *Linder* v. *United States*, in which the Supreme Court decided that 'direct control of medical practice in the states is beyond the power of the federal government,' concludes that 'Congress, therefore, cannot directly restrict the professional judgment of the physician or interfere with its free exercise in the treatment of disease. Whatever power exists in that respect belongs to the state exclusively.' . . .

"There are features, too, of the majority opinion of the Supreme Court which it is difficult to reconcile with the facts:

"That Mr. Justice Brandeis, in writing the opinion, is in error as to the attitude of the American Medical Association toward the medical restrictions of the Volstead Act" is clearly shown in the brief which the American Medical Association filed in this case as *amicus curiae*, challenging the conclusion which is drawn from the 1917 resolution of this House and vigorously attacking the act now under review as arbitrary and unreasonable. In 1924 this House adopted a resolution expressing its disapproval of those portions of the act "which interfere with the proper relation between the physician and his patient in prescribing alcohol medicinally. . . .

"The fact that Congress has arrogated to itself the functions of the medical profession and the pharmacologist in the enabling acts for the enforcement of the Eighteenth Amendment and that the Supreme Court has sustained Congress in the usurpation of these functions holds a serious threat to the public health.

"No one is able to foresee to what extremes of restrictive legislation Congress may be driven by uplifters, professional reformers, cultists and fanatics, once they gain the power, or what drug or therapeutic procedure, professional privilege or constitutional rights may fall under the ban."

The American Association for Medical Progress says in a recent circular letter, "Of the bills designed to regulate the practice of the healing art there are about twenty which, if passed, would place the 'opinions' of untrained men and women on a par with the findings of impersonal research. . . .

"The individual members of the profession must awaken to a realization of their responsibilities and instruct their representatives in county, state and national organizations to keep watch for, and to attack, every attempt, through federal or state legislation, to stay the march of medical progress, to hamper public health administration, and to regulate the use and dosage of accepted remedies."

Your attention has previously been called to numerous arbitrary restrictions imposed on the medical profession by unncessary restrictive enforcement regulations regarding medicinal agents. I need only mention the statement on the back of a recent issue of the Volstead prescription book; i. e., "You are personally responsible for this book. It will not be replaced if lost and failure to properly safeguard it will

result in revocation of your permit." Such a statement may be characterized only as insulting to an honored profession.

This is a serious subject, on which this House has spoken in no uncertain manner and regarding which individual opinions may vary; but individual opinions and convictions should not have a place or be given publicity as representing the majority opinion of the members of the American medical profession.

Address of President-Elect Jabez N. Jackson

Mr. Speaker and Members of the House of Delegates:

I desire to call to your attention an action recently taken by your Board of Trustees which I consider of much importance and which, in my judgment, should have the added endorsement of this body. I refer to a resolution passed by the Board calling on the Council on Medical Education and Hospitals to make mandatory a course of instruction in the "Principles of Medical Ethics" in every medical college whose standards merit its recognition.

Our profession occupies a rather peculiar position among the professions and avocations of men. More than any other it rests fundamentally on the base of faith. Individually our relative ability as physicians is not susceptible of obvious proof. The merchant exhibits his wares on the counter and shelf, and since they are material things the prospective purchaser can judge adequately for himself of the quality and of the price. The realtor and manufacturer have like advantages. The lawyer in his arguments and briefs proves his knowledge of law and his powers of logic. The preacher in the pulpit proclaims his teachings in words of oratory which please our ears or persuade our minds. The ability of a medical man, however, cannot be proved by words of logic or eloquence, nor displayed in any material way. The logic of our science cannot be judged by the mind untrained. We must be accepted or rejected, therefore, by our ability to influence the faith of our followers. The consequences of medical treatment are not necessarily proof whether good or bad. Even in surgery, wherein at least part of our skill is manifest, the judgment of relative capacity cannot be made by one who has not had adequate opportunity for comparative observation; and judgment whether wise or unwise is difficult enough for the expert in a matter in which so many variables enter. Trust and faith become, hence, the necessary foundations of our profession.

In consequence, it is obvious that to merit the faith of man and win for our profession his confidence and respect certain conditions are necessary. Foremost, of course, must be the eternal pursuit of knowledge which shall enable one actually to do the best that is known to be done. In this respect our progress has been most creditable in the past generation. Our science, which is our knowledge, has made marvelous advancement. Our educational avenues through which this knowledge is disseminated, in the medical schools and in medical societies, have been highly organized. But, as Polak aptly remarks, "Science satisfies the doctor, but Art pleases the patient." Art is found in the practical application of the knowledge of science to the needs of the sick. And herein enters the complication of human relations. And in human relations enters ethics.

The "Principles of Ethics" as promulgated by our association is an attempt to outline the pathway for conduct in human relationships which shall make him who follows it worthy of that faith and trust on which our real standing must rest. It is a religion which, if understood, proposes to make a doctor a true Christian in the discharge of his duties to his fellow man and in the observation of his relation to his professional co-laborer. Knowledge alone is not enough. A scholar may yet be a scoundrel. One may be wise and yet not worthy. Education and character must go hand in hand if the ideals of our profession are to be maintained. Is it not therefore obvious that our medical educational system should develop character as well as impart scientific knowledge?

In the older days when there was perhaps little of actual scientific knowledge to be acquired, the matter of human relationship was much considered. In the absorbing demands of our rushing scientific advances have we not perhaps lost sight a little of the side of ethics?

On the other hand, we are living today in an age of unequaled commercial progress. Machinery and organization have brought about a new civilization, a civilization vastly more complicated, vastly more insidious. It behooves our profession to consider most carefully its relations to these new problems.

Again, Truth has always its enemies. The idealism of medicine ofttimes seems difficult for even our well wishers to understand. Our efforts for the welfare of people even at the expense of our own selfish interests are frequently misunderstood. Our purposes are even misrepresented by our enemies. The point of attack is usually our ethics, interpreted by such as a secret code for self protection and selfish advancement. Our opposition to ignorance and charlatanism is attributed to mercenary envy. We do not advertise as does the business man, and he cannot understand why.

We have a published pamphlet on the "Principles of Medical Ethics," and yet even this rudimentary presentation has probably not been read by many doctors and by practically none of the laity. Yet on it rests the eternal fitness of our profession. It is my firm conviction, therefore, that a comprehensive exposition of ethics should be undertaken, first in a thorough course of instruction to our oncoming young men in medicine right at the onset of their career and the essentials of character inspired equally with the infusion of scientific knowledge. Thus inspired, we should have a new generation of worthier men to honor a worthy profession. Furthermore, when doctors themselves more fully understand our principles they will be better prepared to represent our profession intelligently and to defend its ideals.

Finally, I believe that a more comprehensive and explanatory manual should be composed which will translate into the language of the laity a real understanding, and that by word and in print its arguments should be carried to the people. Its composition should probably be referred to the Judicial Council.

(The remaining minutes of the Monday morning meeting will appear next week.)

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest: such as relate to society activities, new hospitals, education, public health, etc.)

ARKANSAS

State Medical Election.—At the fifty-second annual session of the Arkansas Medical Society, Little Rock, Dr. Robert H. T. Mann, Texarkana, was elected president-elect; Drs. Homer Scott, Little Rock, Joseph B. Wharton, El Dorado, and Oscar J. T. Johnston, Batesville, were elected vice presidents, and Royal J. Calcote and William R. Bathurst, both of Little Rock, treasurer and secretary, respectively. Drs. William W. Verser, Harrisburg, and Laurence L. Purifoy, El Dorado, were the new councilors elected. The president for this year is Dr. Henry Thibault, Scott. The next annual meeting will be at El Dorado.

FLORIDA

Bills Introduced.—House bill J. R. 690 provides for the appointment of a commission to inquire into the need of a sanatorium for the care and treatment of persons with mental disorders. House bill 404 would enlarge the powers of the bureau of vital statistics by providing for the registration with the bureau of marriages and divorces. Senate bill 401 and house bill 803 would prohibit the use of arsenic or any of its derivatives as a fertilizer or spray on bearing citrus trees; it would also prohibit the sale of citrus fruit containing any arsenic. House bill 546 would provide for the establishment, location and type of a state sanatorium for tuberculous individuals.

Suwannee River Society and Others.—Dr. Henry Mason Smith, Tampa, addressed the Pasco-Hernando-Citrus County Medical Society, recently, on "Organized Medicine," and Dr. Roscoe C. Hubbard, Tampa, on "Value of Maintaining

Membership in County and State Medical Societies.——The Columbia, Hamilton, Madison and Suwannee county medical societies recently met at Stumble Inn on the banks of the Suwannee River; a motion was carried to change the name of the joint society to the Suwannee River Medical Society. Among the speakers were Drs. Henry F. Airth, Live Oak; Will C. White, Live Oak, and Robert B. Harkness, Leonidas M. Anderson and Thomas H. Bates, all of Lake City.——The Duval County Medical Society held its annual dinner recently at the George Washington Hotel, Jacksonville. The guests were the superintendents of the local hospitals and presidents of the component county medical societies of the state; Dr. Edward Starr Judd, Rochester, Minn., the guest of honor, gave an address on "Surgery of the Biliary Passages"; Dr. Louie Limbaugh, the president, presided.——Dr. George C. Tillman, Gainsville, was elected president of the reorganized Central Florida Medical Society in March; no physicians can be members who are not members of the county medical society. The *Florida State Medical Journal* was designated as the official journal; meetings will be held twice a year, the next in October, at Gainesville.——Mr. S. Ross Campbell of Philadelphia entertained about 500 members of the Florida Medical Association at a banquet at the new Palm Beach Hotel, April 5.

ILLINOIS

Bill Introduced.—Senate bill 403 would regulate the sterilization of criminals.

Health Officer Resigns.—Dr. Raymond V. Brokaw, for three years city health officer of Springfield, has resigned, effective, June 1, it is reported.

Adams County's Annual Picnic.—The annual picnic of the Adams County Medical Society will be at Camp Irwin on the Mississippi River, a few miles south of Quincy, June 16; a picnic dinner will be served at noon, and the society invites every ethical physician in central western Illinois, southeastern Iowa and northeastern Missouri to be its guest on this occasion. There will be addresses by Dr. John R. Neal, Springfield, chairman, legislative committee, Illinois State Medical Society, on "Legislative Problems," and by Dr. Edwin G. C. Williams, Danville, on "Professional Collections."

Society News.—Dr. William H. Bishop was elected president of the Elgin Physicians' Club, May 9, and Dr. Milton Jacobs, secretary. Dr. Solomon Strouse, Chicago, addressed this annual meeting on "Diabetes."——At a meeting of the Rock Island County Medical Society, Fort Armstrong, May 10, Dr. Robert W. Keeton, Chicago, gave an address on "Feeding the Sick in Infections." There was a round table discussion on the control of obesity.——A banquet will be given, June 1, at the LeClaire Hotel, Moline, during the session of the state medical society, for the alumni of Washington University, all members of which are invited to attend.

Chicago

Hospital News.—The U. S. Marine Hospital, 4141 Clarendon Avenue, is being remodeled at a cost of $184,000.——Leroy Millner has been appointed superintendent of the Municipal Tuberculosis Sanitarium, 5601 North Crawford Avenue.——The medical staff of the Garfield Park Hospital has been reorganized.

Physician Sentenced.—William Blanchard was arraigned before Judge Carpenter, May 6, and sentenced to the federal prison at Leavenworth for one year and a day for violation of the Harrison Narcotic Law. This is said to have been the sixth time that Dr. Blanchard has been arraigned on narcotic charges; he came to this country from the Franco-Prussian border, and is recorded as a graduate of the National Medical University of Chicago in 1905; the assistant district attorney announced that steps would be taken to have him deported.

Faculty Changes at University of Chicago.—Dr. Frederic W. Burcky, clinical instructor in medicine, Rush Medical College, has been granted a leave of absence for one year from April 1 on account of ill health; Dr. Leo C. Clowes, clinical associate in medicine, Rush Medical College, resigned, February 10; Dr. Paul C. Hodges, associate professor of roentgenology, Peking Union Medical College, China, has been appointed professor of roentgenology in the department of medicine and roentgenologist to the university hospitals for thirteen months from June 1; Dr. Louis Bothman has been appointed part-time clinical instructor in ophthalmology in the department of surgery for two years from March 1; Dr. Elvin M. Hartlett has been appointed instructor in ophthalmology for sixteen months from March 1; Dr. Franklin C. McLean has been appointed chairman of the department of medicine until June 30, 1927, and then for three years.

Dedication Week at Northwestern University.—A program has been arranged for the dedication, June 13-17, of the new buildings of Northwestern University Medical School on the McKinlock Campus, East Chicago Avenue near the lake. There will be alumni clinics in all the departments of the Montgomery Ward Memorial in the mornings. The Archibald Church Library and the Frederick Robert Zeit Museum of Pathology will be dedicated in the afternoon, June 15, and oil portraits of the founders of the medical school—Nathan Smith Davis, William H. Byford, John H. Hollister, Ralph N. Isham and Davis Rutter—will be unveiled; also busts of Edmund Andrews, Robert L. Rea and others, and oil portraits of John Harper Long and Frank Billings. The alumni dinner will be that evening at the Congress Hotel. On the afternoon of June 16, the Robert L. Rea professor of anatomy will be installed, and the James A. Patten Research Laboratories of Bacteriology dedicated. In the evening Dr. Hugh T. Patrick will address a special convocation in the John B. Murphy Memorial Auditorium, and the following evening former governor Frank O. Lowden will speak at the general exercises in dedication of all the new buildings. There will also be special dedication programs for the new law and commerce schools of Northwestern, which are adjacent to the medical and dental schools on the McKinlock Campus.

Report of Community Trust.—The eleventh annual report of the Chicago Community Trust, presented May 11, indicates that it is one of the most successful community trusts in the country. Funds in hand or assured amount to nearly $5,000,000, and funds and property valued at $2,400,000 are now being applied to charitable use. The income distributed last year for charitable purposes exceeded $68,000, in addition to properties used for charitable purposes which yield no income. Fifty-one different institutions received a part of the funds distributed. Five gifts and bequests were reported: one for $450,000, one for $230,000, one for $30,750 and two for $10,000 each. The Community Trust will eventually receive from wills reported during the year not less than $2,000,000, and probably much more. An executive committee and an advisory council comprising some of the best known business men of Chicago manage the funds, of which there are three classes: (1) funds designated for general purposes, the particular institutions to be selected by the Community Trust committee; (2) funds in which a number of institutions are named; the income to be distributed in such proportions as the trust committee shall determine; (3) funds which are entirely undesignated, the use of the income of which is determined by the Community Trust Committee. There are said to be about sixty community trusts in the United States, the Cleveland Foundation being the first established. The aggregate of funds held in trust by all of the community trusts and available for charitable use is estimated at $14,000,000, while the aggregate in prospect for future use is estimated at $150,000,000. Clifford W. Barnes is chairman of the executive committee of the Chicago Community Trust, and Mr. Frank D. Loomis, 10 South LaSalle Street, secretary; the telephone is Franklin 3356.

IOWA

Professor Myers Goes to Western Reserve.—Victor C. Myers, Ph.D., professor of biochemistry, State University of Iowa College of Medicine, has accepted the appointment as professor of biochemistry in Western Reserve University, Cleveland, and will assume his new duties in September. Dr. Myers will be consulting biochemist to the university hospitals, and will supervise the work in biochemistry at the Cleveland City Hospital. He will have facilities at the new Institute of Pathology for the special type of research which he has been conducting. Dr. Myers has been at the University of Iowa since 1924.

More Resignations at State Medical College.—Following the announcement of the resignations of three physicians at the State University of Iowa College of Medicine, Iowa City, last week, the newspapers have announced the resignations also of Dr. Don M. Griswold, head of the department of hygiene and preventive medicine, and that of Dr. Wesley E. Gatewood, associate professor of theory and practice of medicine, both of whom have been associated with the school for a number of years. The resignation of Dr. Lee W. Dean, dean of the college of medicine, was also reported. The state board of education is said to be making an investigation.

LOUISIANA

Health Department Items.—The president of the state board of health, Dr. Oscar Dowling, conferred with members of the U. S. Public Health Service, the Red Cross and other state health officers in Memphis, April 28, with regard to the flood situation.——The state board of health exhibit cars returned to New Orleans, May 2, after having visited forty-four towns in thirty-three parishes; the number of visitors to the exhibits averaged about 800 a day; 270 samples of water were examined on the trip and 831 samples of milk.

Society News.—Dr. Middleton F. Wilson, New Orleans, presented a moving picture on how biologic preparations are made before the Natchitoches Parish Medical Society at the March meeting. Dr. Oscar Dowling addressed this meeting, and invited the members to visit the exhibit of the state board of health which was touring the state and was in Natchitoches at that time.——The Orleans Parish Medical Society is sponsoring a plan to hold a "health week" in New Orleans this fall, and has appointed Dr. Paul J. Gelpi, Jr., chairman of a committee which expects to arrange plans whereby every person in the city will be provided with a physical examination.——Drs. David I. Hirsch, Monroe; Charles C. DeGravelles, Morgan City, and James Birney Guthrie, New Orleans, were elected vice presidents of the Louisiana State Medical Society at the New Orleans meeting.

Court Upholds Medical Practice Act in Fife Brothers Case.—The Supreme Court of the United States rendered a decision, May 2, holding that the medical practice act of Louisiana is constitutional. The decision was made in the case of Joseph D. Fife and Walter W. Fife, chiropractors of New Orleans, who were found guilty in 1924 of practicing medicine without a license and sentenced to jail. In the period intervening, the Fife brothers have also been sentenced to prison for contempt of court, in that they practiced chiropractic in violation of an injunction issued. The Supreme Court of the United States also ruled that the medical practice act could be enforced by a court order sentencing the brothers to prison for contempt of court in ignoring the injunction which prohibited them from practicing. The conviction of the Fife brothers on criminal charges for illegal violation of the act also was upheld.

MARYLAND

Unusual Explosion in Laundry.—A mangle in the laundry of the Springfield State Hospital, Sykesville, exploded, April 28, filling the laundry with steam and flying steel fragments, and killing one employee and injuring two others. Thirty persons were at work in the laundry when the explosion occurred. The cause has not yet been determined.

Society News.—Dr. David L. Gifford, North East, was tendered a testimonial dinner by the Cecil County Medical Society, Elkton, April 23, in honor of his fiftieth year in the practice of medicine. Dr. Gifford is a past president of the county society.——The 1912 alumni of the University of Maryland School of Medicine will hold a reunion, May 20-22, at the Emerson Hotel, Baltimore; clinics and social activities have been arranged.

Health Officers' Annual Conference.—Under the auspices of the state department of health, the annual conference of health officers will be held at the Medical Library Building, May 27-28; Dr. John S. Fulton, director, state department of health, will preside, and among the speakers will be Drs. J. Whitridge Williams, professor of obstetrics, and William H. Howell, director, School of Hygiene and Public Health, Johns Hopkins University Medical Department; Victor Cullen, superintendent, state sanatorium; Martin F. Sloan, president, Maryland Tuberculosis Association; Dr. Elmer C. Kefauver, health officer of Frederick County, and Mr. George Fox, superintendent of schools, Anne Arundel County.

Personal.—Dr. Hugh H. Young, Baltimore, has been elected an honorary member of the German Society of Urology.——Dr. Henry M. Hurd, from 1889 to 1911 superintendent of the Johns Hopkins Hospital, celebrated his eighty-fourth birthday recently; Dr. Hurd has nearly completed a history of the hospital.——Dr. Casper L. Woodbridge has returned to Baltimore from China where he was engaged in missonary work in a medical college near Nanking.——Francis M. Root, Ph.D., associate in medical entomology, School of Hygiene, Johns Hopkins University, Baltimore, sailed for Venezuela, April 27, to study mosquitoes under the auspices of the International Health Board. This is a continuation of work done two years ago in Brazil by Dr. Root. He expects to return in September.

Fire Department Runs Ambulance Service.—The April 22 meeting of the Baltimore City Medical Society in Osler Hall was given over to discussion of the emergency ambulance service of the city. The Baltimore Association of Commerce, the Baltimore Safety Council and the West Baltimore Medical Society participated in the discussion. Reports were made by committees of various associations and a resolution was adopted recommending that the mayor have $21,000 appropriated for the purchase of seven ambulances and $45,000 for maintenance each year, which is an increase of $10,000 over the former suggestion. The director of Johns Hopkins Hospital and the superintendent of the University Hospital opposed the present plan to place the ambulance service of the city under the control of designated hospitals. According to a later report, a municipal ambulance service has been established under the control of the fire department, although such action was opposed by local medical societies and the Baltimore Association of Commerce. The board of estimates appropriated $38,890 for five new ambulances, equipment and the appointment of a surgeon and twenty firemen for the operation of the system for the remainder of the year. The surgeon to be appointed by the fire board will receive a salary of $2,400; he will train the firemen selected for ambulances in first aid work, and will direct the operation of the system.

MASSACHUSETTS

Chiropractic Bill Defeated.—The house, April 21, defeated a bill which was designed to provide a board of chiropractic examiners in Massachusetts. The *Boston Medical and Surgical Journal* credits the defeat in a large part to the efforts of the committee of the state medical society under the leadership of Drs. James S. Stone and Thomas J. O'Brien.

Instruction for Reserve Officers.—Sixty-eight officers attended the winter course of instruction for the army medical department reserve at the Army and Navy Club, Boston, March 9; the subjects presented were sanitation, sanitary devices, inspections and reports by Lieut. Col. William J. L. Lyster; system of evacuation from hospital stations within the army by Major Thomas R. Goethals, medical reserve corps, and essential paper work by Capt. Herbert N. Dean, medical administrative corps.

State Medical Meeting.—The one hundred and forty-sixth annual meeting of the Massachusetts Medical Society will be at the Hotel Statler, Boston, June 6-8. Medical and surgical clinics will be held by the staffs at a number of hospitals, following which will be luncheons at several hospitals for the visiting physicians. There will be a symposium on the acute surgical abdomen, Tuesday morning, in the section on surgery, the speakers being Drs. Peer P. Johnson, Beverly; Edward P. Richardson, Boston; Kendall Emerson, Worcester; Allen O. Whipple, New York; Reginald Fitz, Boston, and John H. Gibbon, Philadelphia; and a symposium on rickets in the pediatric section by Drs. James L. Gamble, Edwin T. Wyman and John L. Morse, all of Boston. Other prominent physicians of the state will take part in the discussion of the sections. The Shattuck lecture will be Tuesday evening by Dr. Philemon E. Truesdale, Fall River, on "Group Practice," following which Dr. Timothy Leary, Boston, will discuss "Studies from the Practice of a Medical Examiner." Out-of-state speakers include also Drs. Henry G. Bugbee, New York, on "Clinical Value of Kidney Functional Tests"; Byrl R. Kirklin, Mayo Clinic, Rochester, Minn., "Efficiency and Limitations of Cholecystography"; Frank E. Adair, New York, "Treatment of Breast Cancer"; William Walter Wasson, Denver, "The Hilum of the Lung," and William L. Clark, Philadelphia, "Electrothermic Methods in Surgery." The annual discourse will be by Dr. William H. Rose, Worcester, Wednesday, 1 p. m., on "Industrial Surgery," preceding the annual dinner.

MICHIGAN

Veterinary Succeeds Layman as Health Officer.—The Bellevue *Gazette* notes that the township board, March 2, accepted the resignation of Bert Tucker as township health officer, and appointed in his place J. O. Nicholson, a local veterinarian, who is also health officer of Bellevue.

Detroit's Medical Library Opens.—The medical science department of the Detroit Public Library was formally opened, May 2, by the Wayne County Medical Society, the board of education and the Detroit Library Commission, at the new building, 625 Mullett Street, which will be used jointly

by the Detroit College of Medicine and Surgery and the library. Dr. Carl A. Hamann, dean, Western Reserve University School of Medicine, Cleveland, gave the principal address on "Importance of Medical Libraries." A public reception was held to which the civic and scientific organizations were invited. Thus, there is in Detroit a medical library as part of the city public library with rare as well as modern medical books, journals and other documents. The library has a large reading room, several study rooms, a large stock room and offices for the staff. A committee of five from the Wayne County Medical Society acts in an advisory capacity to the librarian and the library commission.

State Medical Meeting.—The one hundred and seventh annual meeting of the Michigan State Medical Society will be at Mackinac Island, June 16-18, under the presidency of Dr. John B. Jackson. The council will meet June 15 and the house of delegates the following day at the Grand Hotel. The speakers at the general sessions will be Drs. Ralph Pemberton, Philadelphia, "Arthritis"; Dean Lewis, Baltimore, "History of Goiter Pathology," and Morris Fishbein, Chicago, "Professional Vagaries." Section papers will be presented by many prominent physicians of Michigan and by Paul M. Andrus, London, Ont., on "Pathology of Pulmonary Radiologic Opacities," and by I. F. Huddleson, of the department of animal husbandry, Michigan State College, on "Malta Fever." Mackinac Island offers an unusual opportunity for entertainment. All members who are archers are requested to bring their tackle, as Friday and Saturday afternoons have been given over to outdoor events and archery will be on the program as well as games, an archery-golf contest and a golf tournament. Persons desiring to take part in these contests should address Dr. Roland G. B. Marsh, Tecumseh.

MISSOURI

Hospital News.—A survey of health conditions in St. Louis is being conducted by Dr. Clarence St. Clair Drake of the American Public Health Association, under the direction of the Citizens' Committee for the promotion of St. Louis health activities. Among various questions to be considered will be the necessity for more hospital beds in St. Louis.

Students Volunteer for Relief Work.—One hundred senior students in St. Louis University School of Medicine volunteered their services to the American Red Cross to assist in caring for the sick and injured persons in the flooded areas of the Mississippi Valley. The offer was accepted, it is reported. The students were organized into units to be sent to refugee camps, and the medical school arranged their examinations, so that this work could be undertaken. The St. Louis *Post Dispatch* notes that in 1918 the upper classmen of St. Louis University School of Medicine volunteered to assist in the influenza epidemic, and that a few months ago more than 300 students of this school volunteered as donors for transfusion purposes for the poor of St. Louis.

Society News.—The Missouri-Kansas Neuropsychiatric Society met at State Hospital number 2, St. Joseph, April 13; cases were presented by Drs. Theodore H. Romeiser, Harvey O. Daniel and James H. Parker; Major Edgar King, U. S. Army, read a paper on "Defects and Disorders, and Their Detection in the Selection of Recruits."——Dr. Francis M. Pottenger, Monrovia, Calif., will deliver an address in the auditorium of the St. Louis County Medical Society, under the auspices of the Trudeau Club, May 31, on "Evolution of Early Tuberculosis and Its Recognition," and will conduct a clinic in the afternoon.——Dr. Jacob J. Singer, assistant professor of clinical medicine, Washington University School of Medicine, St. Louis, sails for Europe, June 17, to inspect chest clinics in various medical schools.

MONTANA

Personal.—Dr. Albert P. O'Leary has been elected mayor of Big Timber.——Dr. Thomas F. Walker has been reelected county health officer at Great Falls for a term of two years. ——Dr. Byron L. Pampel, Livingston, has been elected president of the state board of health, and Dr. George M. Jennings, Missoula, vice president.——Dr. Wyman G. Hough, Malta, was recently appointed county health officer and county physician of Phillips County; a case of Rocky Mountain spotted fever was recently reported at Phillips County, the third case in the history of the county.

State to Breed Tick Parasites.—Governor Erickson approved a bill, March 16, appropriating $60,000 for the erection of a laboratory at Hamilton to be used for the study of Rocky Mountain spotted fever. According to *Science*, the state has appropriated about $25,000 a year for two years to carry on this work, $10,000 of which is for the breeding, study and colonizing of a tick parasite recently introduced into this country from France by Dr. S. Burt Wolbach of the Medical School of Harvard University, Boston. The Montana laboratory will provide facilities for rearing large numbers of infected and noninfected ticks, and for the care of a large number of wild rodents. Work on spotted fever in the state is being conducted by the state board of entomology, cooperating with the U. S. Public Health Service. The federal government is occupied now chiefly with work on a vaccine made from infected ticks by Spencer and Parker, and used last year on about a thousand persons with encouraging results. The state board of entomology is concerned chiefly at present with the French tick parasite, and with the destruction of ticks by killing wild rodent hosts and dipping the domestic animals. Dr. Roscoe R. Spencer, U. S. Public Health Service, is in charge of the laboratory at present. The state board of entomology comprises Dr. William F. Cogswell, Helena, secretary, state board of health; W. J. Butler, D.V.S., and R. A. Cooley, state entomologist, secretary.

NEBRASKA

Personal.—Dr. Cleland G. Moore has been elected mayor of Fremont.——Dr. Jay B. Babcock has been appointed an assistant physician at the Hastings State Hospital vice Dr. Frank D. Burgess, resigned.

Society News.—Dr. John M. Banister addressed the Omaha-Douglas County Medical Society, March 22, on "Ocular Indications in Obstetric Practice."——The Twelfth Councilor District Medical Society met at the West Nebraska Methodist Hospital, Scottsbluff, March 11; among others, Dr. George M. Anderson, Cheyenne, Wyo., spoke on "The General Practitioner's Relation to Public Health," and the Scottsbluff County Medical Society presented a moving picture on pulmonary tuberculosis; Dr. Albert L. Cooper, Scottsbluff, was elected president of the district society.——Dr. Claude P. Fordyce, Falls City, among others, addressed the Richardson County Medical Society, April 6, at Humboldt on children's health conferences.——The Medical Arts Building, Omaha, was formally dedicated, May 12; the principal address was by Dr. Harold Gifford on "History of Medicine in Omaha"; Dr. Frank M. Conlin, president of the county medical society, accepted the building in behalf of the medical profession from its owners, the Kedzie State Bank of Chicago.

NEW JERSEY

Fined for Stealing Clams.—Three men digging clams in polluted water in New Jersey were recently apprehended by a state health department inspector and the police department, and two of them were convicted and fined $25 each; the third escaped, and a warrant has been issued for his arrest.

Dr. Potter Appointed Medical Director.—Dr. Ellen C. Potter, until recently head of the Pennsylvania State Department of Welfare, has been appointed medical director of the New Jersey Training School, Totawa, and advisory consultant of the state department of welfare; she will take up her work, July 1. Dr. Potter was formerly on the faculty of the Woman's Medical College of Pennsylvania, and a member of the Philadelphia Municipal Bureau of Research.

State Medical Meeting.—The one hundred and sixty-first annual meeting of the Medical Society of New Jersey will be held at Haddon Hall, Atlantic City, June 9-11. The board of trustees will meet the evening of June 8. There will be a symposium on intravenous therapy, Friday, by Drs. George T. Spencer, Elizabeth; John A. Kolmer and Frank M. Huntoon, Philadelphia; Robert A. Kilduffe, Atlantic City, and John W. Gray, Newark; the presidential address will be delivered at noon, Friday, by Dr. James S. Green, Elizabeth. Among the other speakers will be Dr. Frederick M. Allen, Morristown, on "Pernicious Anemia"; Dr. Martin E. Rehfuss, Philadelphia, "Modern Approach to Diseases of the Digestive Tract"; Dr. Frank J. McLoughlin, Jersey City, "Operative Treatment of Duodenal Ulcers"; Dr. George P. Pitkin, Bergenfeld, "Better Anesthesia for Thyroidectomies," illustrated, and Drs. Emanuel D. Newman, Newark, Harrison S. Martland, Newark, and Henry A. Cotton, Trenton, on syphilis. The Saturday morning program will be given at the Atlantic City Hospital by the staff and will be entirely clinical, comprising demonstrations, clinics in various branches of medicine and surgery and laboratory work.

NEW MEXICO

State Medical Election.—At the forty-fifth annual meeting of the New Mexico Medical Society, Carlsbad, May 9-11, under the presidency of Dr. Carey B. Elliott, Raton, Dr. Francis M. Pottenger, Monrovia, Calif., among others, discussed "Present-Day Conception of Clinical Pulmonary Tuberculosis," and Dr. Andrew W. Morton, San Francisco, "Spinal Analgesia." Other speakers included Dr. Arthur C. Scott, Temple, Texas; Drs. Gottlieb Werley, Kevin D. Lynch, Charles P. and William L. Brown, all of El Paso, and Drs. Fred D. Vickers, Deming; Albert R. Hatcher, Wellington, Kan.; Robert O. Brown, Santa Fe; Carl Mulky, Albuquerque, and William T. Joyner, Roswell. Dr. Carey B. Elliott, Raton, was made president at this meeting; Dr. Thomas P. Martin, Taos, president-elect; Dr. Fred D. Vickers, Deming, vice president, and Dr. Leo B. Cohenour, 219 West Central Avenue, Albuquerque, secretary-treasurer.

NEW YORK

Malpractice Suits Increase.—In his report to the house of delegates, the counsel of the Medical Society of the State of New York tabulated the number of malpractice suits instituted during the thirteen months ending February 28. The suits instituted numbered 166, and the number disposed of, 146. The largest number instituted under one class was thirty-three under "operations"; twenty-two suits were classified under "obstetrics"; fifteen each under "burns, x-ray, etc.," and "fractures, etc.," and fourteen under "diagnosis." Twenty-five suits are classified as settled, and 112 as dismissed, discontinued, abated or tried (verdict for defendant). In six there was judgment for the plaintiff, and three were appealed (judgment for defendant). During the period reported on, thirty-four more suits were instituted than during the period reported in the last annual report. The number of physicians insured has increased 3 per cent during the last year; 6,073 are now insured as compared with 5,711 in the preceding year. The counsel considers that the group plan of insurance is working well.

New York City

Survey of Medical School.—The New York Post-Graduate Medical School and Hospital reports that it has engaged Dr. Edward H. Hume, until recently president of Yale-in-China, to make a comprehensive investigation and report on the activities, present and future, of the "Post Graduate." Dr. Hume has already taken up this work which will continue for several months. Dr. Hume is a graduate of Johns Hopkins University Medical School, Baltimore, and has been associated with Yale-in-China since its foundation, and since 1923 has been the president.

Society News.—At the annual election of the Medical Society of the Borough of Bronx, recently, Dr. Lipman Miller Kahn was elected president, and Dr. Isidore H. Goldberger, secretary.——The New York Academy of Medicine gave a symposium on the thyroid, May 19, in which the speakers were Drs. William F. Rienhoff, Jr., Baltimore, David Marine, Emil Goetsch and William H. Meyer.——The program of the Medical Society of the County of Kings, May 17, included addresses by Henry F. Osborn, president of the board of trustees, American Museum of Natural History, on "Human Evolution"; by William K. Gregory, professor of paleontology, Columbia University, on "The Origin of Man," and by Dr. Frederick Tilney, professor of neurology, Columbia University, on "The Brain of Prehistoric Man," all of which were illustrated. This society is giving a series of lectures by its own members in its library building, 1313 Bedford Avenue, Brooklyn, afternoons, the week of May 23, all of which are open to the public; there will be a lecture, Thursday evening, also, for men only. Dr. Bernard Fantus, Chicago, gave the final practical lecture of the current series of the society, May 13, on "Sugar."

Personal.—Dr. Henry Dwight Chapin has returned after lecturing on child welfare at the Imperial University of Japan and at the American University of Syria.——Dr. Joshua H. Leiner has been appointed instructor in neurology at the Columbia University College of Physicians and Surgeons.——Dr. Harry E. Cohen has been appointed instructor in pediatrics in the New York Post-Graduate Medical School and Hospital.——Mr. Philip S. Platt has been appointed secretary of the committee on outpatient clinics of New York Tuberculosis and Health Association.——Dr. Morris Grossman has been appointed attending neurologist to the Manhattan State Hospital.——Dr. Walter H. Conley, medical superintendent, department of welfare, was delegated to study the progress in the treatment of cancer in England, France, Germany and Spain; he sailed, April 30.——The following appointments have been made in the New York Polyclinic Medical School and Hospital: Dr. John H. Carroll, professor of internal medicine; Dr. Charlton Wallace, professor of orthopedic surgery; Dr. Percy H. Williams, professor of gynecology, and Drs. Harold E. Santee and Fred W. Bancroft, professors of surgery.——Dr. Peritz M. Kurzweil has been appointed assistant professor of pathology, New York Post-Graduate Medical School and Hospital.

OHIO

Society News.—Dr. Hubert C. King presented a "Report of a Series of Interesting Diabetics" before the Academy of Medicine of Cleveland, May 20, and Dr. Chester D. Christie spoke on "Clinical Consideration of Various Types of Nephritis."——Dr. Trent A. B. Denison, Cleveland, addressed the Columbiana County Medical Society, Lisbon, recently, on "Medical Publicity."——Dr. Cecil Striker, Cincinnati, addressed the Clinton County Medical Society, Wilmington, April 5, on "Periodic Health Examinations."——Dr. Milford E. Barnes, Greenville, addressed the Darke County Medical Society, March 10, on "Darke County's New Health Program."——The Montgomery County Medical Society has added a full-time executive secretary and librarian to its staff; Dr. Charles C. McLean, Dayton, addressed this society, March 18, on "Evaluation of Surgical Risks from the Standpoint of the General Practitioner," illustrated with lantern slides.——Dr. Clayton McPeek, Columbus, addressed the Academy of Medicine of Lima and Allen County, March 15, on "Physiologic Heart Studies in Relation to Valvular Action."——Dr. H. Jerry Lavender, Cincinnati, addressed the Logan County Medical Society, March 4, on "Syphilitic Manifestations of the Skin and Mucous Membranes"; Dr. James F. Baldwin, Columbus, addressed the society, April 1, on "Progress of Surgery and Medicine in the Last Fifty Years." This meeting was in connection with the celebration of the fiftieth anniversary in the practice of medicine of Dr. John H. Wolfe, De Graff.——The Portage County Medical Society was entertained by Dr. and Mrs. Jay D. Smith, Akron, April 7; the program was a symposium on salpingitis.——Dr. John H. J. Upham, professor of clinical medicine, Ohio State University College of Medicine, Columbus, addressed the Richmond County Medical Society, March 17, Mansfield, on "The Reported Increase of Heart Disease," and Dr. Herman H. Hoppe, professor of neurology, University of Cincinnati College of Medicine, on "Neuresthenia."——The Summit County medical and dental societies held a joint meeting, April 11, at Akron, which was addressed by Weston A. Price, D.D.S., Cleveland, on "Newer Knowledge of Calcium Metabolism with Special Consideration of Tooth and Bone Formation." Dr. Roy W. Scott, associate professor of medicine, Western Reserve University School of Medicine, addressed the medical society, April 19, on "Facts on the Heart and Aorta."——Dr. Edmund R. Brush, Zanesville, addressed the Muskingum County Academy of Medicine, April 6, on "Fractures of the Patella."——Dr. Hugh A. Baldwin, Columbus, addressed the Hempstead Academy of Medicine, Portsmouth, recently, on "The Neglected Prostate."

OREGON

Personal.—Dr. Richard F. Thompson, Roseburg, is resigning as director of the Douglas County health unit, July 1, to accept a fellowship in the National Research Council, which will permit studying at Columbia University and abroad in immunology and bacteriology.

University News.—Dr. Henry J. Gerstenberger, professor of pediatrics, Western Reserve University School of Medicine, Cleveland, recently addressed the students of the University of Oregon School of Medicine on "Rickets."——Dr. Wilmot C. Foster, assistant professor of anatomy, University of Oregon Medical School, has been granted a year's leave of absence to work in surgical anatomy at the Mayo Clinic, Rochester, Minn.

Hospital News.—The governor has approved an appropriation of $225,000 toward the construction of the proposed Eastern Oregon Tuberculosis Hospital.——The Morningside Hospital, Portland, which was owned by the late Dr. Henry W. Coe, has been bequeathed to his estate, and will be operated under the present director, Dr. Josiah W. Luckey.——St. Mary's Hospital, Albany, was recently closed, the income not having been adequate to meet expenses for some time, it is reported.

Society News.—Dr. Emile F. Holman, professor of surgery, Stanford University School of Medicine, San Francisco, gave the Joyce Lecture in surgery at the Portland Academy of Medicine, April 14, on "Pulmonary Suppuration."——Twenty-seven physicians from Marion, Polk and Yamhill counties attended the April meeting of the Tri-County Medical Society, Salem, which was addressed by Dr. Frederick H. Thompson, Salem, on "Injuries to the Semilunar Cartilages of the Knee," and by Dr. Benjamin N. Wade, Portland, on "Local Anesthesia in Major Surgery." The next meeting will be at McMinnville in May.——At attempt to repeal the present law requiring medical examination of applicants for marriage licenses has been defeated in the legislature.

PENNSYLVANIA

Infant Mortality at Pittsburgh.—Telegraphic reports to the U. S. Department of Commerce from sixty-eight cities with a total population of about 30 million, for the week ending May 7, indicate that the highest infant mortality rate (154) was for Pittsburgh. The infant mortality rate for Pittsburgh for the year 1925 was eighty-two.

Pottsgrove Wants a Physician.—Our Pennsylvania correspondent writes that the residents of Pottsgrove in Northumberland County desire another physician in that community, owing to the death of the former physician. Pottsgrove is said to have a population of about 500; further information may be obtained by addressing Mrs. C. F. Koch.

Personal.—Dr. Roscoe L. Perkins has been reappointed by the council a member of the board of health of Harrisburg for five years.——Dr. John H. Snoke, formerly assistant director of Johns Hopkins Hospital, Baltimore, has been appointed superintendent of the Bryn Mawr Hospital.——Dr. Cecil F. Freed has been appointed associate in surgery on the staff of the Reading Hospital, Reading.

Philadelphia

Medical Women's Alumnae Meeting.—The fifty-second annual meeting of the Alumnae Association of the Woman's Medical College of Pennsylvania will be held at the college, June 9-10; Dr. Alice E. Johnson, clinical professor of psychiatry, will speak on "The General Physician and the Neurotic Patient." Other speakers will be Dr. James C. Small, Philadelphia General Hospital; Dr. Alwin M. Pappenheimer, New York; Dr. Ethel M. G. Peirce, Presbyterian Hospital, Philadelphia; Drs. Tracy and Butler, Dr. Mary M. Spears and Dr. Dott Case Blechschmidt. The banquet will be at the Warburton House, Thursday evening; tickets, $4.

Hospital News.—Mount Sinai Hospital, Fifth and Reed streets, has announced plans for a $1,000,000 addition of four complete units.——Wills Eye Hospital, Eighteenth and Race streets, celebrated its ninety-fourth anniversary, April 2; an appeal was made for contributions, calling attention to the fact that the resources of the institution are limited to endowments.——The U. S. Naval Hospital, Twenty-Fourth Street and Grays Ferry Road, celebrated the one hundredth anniversary of the laying of the cornerstone, April 2; among the speakers were Mayor Kendrick and Admirals Leigh and Magruder.——The campaign for $1,000,000 for the Philadelphia Home for Incurables opened, May 3, when soil was turned for the new home at Belmont and Conshohocken avenues, Bala.——The Abington Memorial Hospital campaign for $1,500,000 was already oversubscribed, May 4.——Ground was broken, May 5, for the first unit of the new Bryn Mawr Hospital building by the president, Samuel M. Vauclain; the first unit will have a capacity of 180 beds, in addition to the administration and isolation building; it will cost $2,000,000.——Dr. Hyman I. Goldstein has been appointed chief of the medical diagnostic clinic of Mount Sinai Hospital, Philadelphia.

Society News.—Dr. H. Brooker Mills, professor of pediatrics, Temple University Department of Medicine, was guest of honor at the eleventh annual dinner of the pediatric society bearing his name. Dr. Frank C. Hammond, dean of the department of medicine, was toastmaster; among the speakers were Dr. Wilmer Krusen, city director of health and charities; Charles H. Grakelow, director of public welfare, and Dr. William S. Wadsworth. This was also the occasion of the birthday of Dr. Mills, and the senior class and the alumni presented flowers.——Dr. Joseph E. Raycroft of Princeton University, Princeton, N. J., addressed the public health and industrial medicine section, College of Physicians, May 9, on "Health Supervision in Colleges and Universities"; Dr. Walter S. Cornell spoke on "Health Supervision in the Philadelphia Public Schools."——Dr. Luther Emmett Holt, Jr., associate in pediatrics, Johns Hopkins University Medical Department, Baltimore, addressed the Pathologic Society of Philadelphia, May 12, on "The Pathogenesis of Tetany."——Dr. Thomas W. Salmon, professor of psychiatry, Columbia University College of Physicians and Surgeons, New York, addressed the Philadelphia Psychiatric Society, May 13, on "The Therapeutic Attitude in Psychiatry."——Dr. Henry K. Mohler was recently elected president of the Philadelphia Heart Association; Dr. James E. Talley, vice president, and Dr. William D. Stroud, secretary.

VIRGINIA

Hospital News.—In the will of the late Mrs. Bertha Virginia Guggenheimer, probated March 12, the Memorial Hospital of Lynchburg was left about $500,000 for the establishment and maintenance of a children's and maternity hospital.——A drive for funds for the proposed Page Memorial Hospital at Luray opened, April 18.——The rural hospital at Farmville, made possible by an appropriation by the Commonwealth Fund, has been under construction since last September, and is expected to be open about next September. The governing board, consisting entirely of laymen, has been appointed, but the medical staff has not.

Dr. White Honored.—More than 400 physicians of Virginia and other states attended a banquet at the Commonwealth Club, Richmond, April 19, to celebrate the seventy-ninth birthday of Dr. Joseph A. White, for many years professor of ophthalmology, otology, rhinology and laryngology, at the Medical College of Virginia, Richmond. Dr. William T. Oppenhimer, Richmond, was toastmaster. Among the speakers were Drs. George E. de Schweinitz, Philadelphia, and Hiram Woods, Baltimore, past presidents of the American Ophthalmological Society; Drs. Thomas B. Holloway, Philadelphia; James Bordley, Jr., Edward A. Looper, Baltimore; J. Shelton Horsley, president, Medical Society of Virginia; Stuart N. Micheaux, president, Richmond Academy of Medicine; Lester H. Taylor, Wilkes-Barre, Pa.; John W. Dunn, Richmond, and the following past presidents of the Tri-State Medical Society of which Dr. White is a past president: Drs. David T. Tayloe, Washington, N. C., and John P. Munroe, Charlotte, N. C. Dr. White was also presented with a gift as a taken of esteem.

WYOMING

Personal.—Dr. George O. Hanna, Lingle, has been appointed health officer of Goshen County.——Dr. George M. Anderson, Cheyenne, whose term as state health officer expires, May 23, has accepted a position with the state board of health of Kentucky.——Dr. Roscoe R. Spencer, U. S. Public Health Service, gave an illustrated talk on Rocky Mountain spotted fever at a dinner given by the Laramie County Medical Society, March 29; the Sheridan County Medical Society also gave a dinner in honor of Dr. Spencer, April 4.

CANADA

Canadian Medical Association Meeting.—The fifty-eighth annual meeting of the Canadian Medical Association will be in Toronto, June 13-18, with headquarters at Exhibition Hall, University College. At the same time will be held the annual meetings of the Ontario Medical Association, the Ontario Radiological Society and the public health association, the tuberculosis association, the society of anesthetists and the radiologic societies of Canada. The first two and one-half days will be devoted to business, the scientific programs beginning Wednesday afternoon. Lack of space forbids abstracting, except to a small degree, the large program of important scientific papers. Sir Charles S. Sherrington will give the second Listerian Oration, Friday evening. The lieutenant governor of Ontario will give a garden party at the Government House, Wednesday afternoon, and the annual dinner dance will be held that evening. The various sections have arranged clinics in the hospitals, ward rounds, demonstrations and symposiums. A golf tournament, June 14, has been planned, and an artistic silver trophy has been presented by the Ontario Medical Association in the form of a challenge cup; other prizes will be presented. The women's program includes, among other things, a trip on Lake Ontario, through the courtesy of Mr. A. L. Mathews, musicales, luncheons, drives and a golf tournament. Among the speakers from the United States in the section meetings will be Drs. Dean Lewis, Baltimore, "Lesions of the Arteries of the Extremities"; Benjamin P. Watson, New York, "Post-

partem Care"; John H. Evans, Buffalo, "Postanesthetic Toxemias"; Allan Rowe, Boston, "Consumption of Oxygen in Health, Disease and Anesthesia"; Ralph M. Waters, Kansas City, "Carbon Dioxide—Its Place in Anesthetic Technic"; Elmer I. McKesson, Toledo; F. Hoeffer McMechan, Avon Lake, Ohio; George S. Derby, Boston; George E. Shambaugh, Chicago; Charles S. McVicar and Verne C. Hunt, both of Rochester, Minn.; Russell A. Hibbs, New York, and Louis K. Poyntz, Chicago.

GENERAL

More Liberal Pay Regulations for Reserve Officers.—All National Guard officers classed as "not belonging to organizations" will benefit by regulations which became effective April 1, governing the requirements for armory drill pay. The regulations now permit proper authorities to order certain duties performed by guard medical officers which are not necessarily drill duties, permitting, says the *Military Surgeon*, medical officers, when ordered to do so, to be paid for conducting physical examinations, vaccinating and inoculating, and for attending drills of line organizations. The officers benefited mostly by the change are general and field officers, and captains and lieutenants not belonging to companies.

Organizations for Hard of Hearing.—The eighth annual meeting of the American Federation of Organizations for the Hard of Hearing, Inc., will be at Chautauqua, N. Y., June 27-30, under the presidency of Dr. Gordon Berry. Monday will be given over to reports illustrated with lantern slides from the various zones; addresses on organization work by representatives from Switzerland, France, England and Holland, and a report of the research committee of which Dr. Wendell C. Phillips, New York, is chairman. Dr. George E. Shambaugh, Chicago, will report on medical research; and Dr. Douglas Macfarlan on hearing aids. Tuesday will be lip reading day with a teachers' council and round table discussion on (1) cooperation from otologists; (2) advertising the private schools, and (3) importance of qualified teachers. The banquet will be Wednesday evening. The new officers will be announced at the banquet, and the president's and treasurer's trophies will be presented.

Road Accidents—Casualty Every Forty-Two Seconds.—The American Road Builders' Association at a meeting in Washington, D. C., May 13, made public the results of a survey of highway accidents in the five years ending Jan. 1, 1927, said to be the most extensive study made into the causes of road accidents. It appears that during this period more than 100,000 persons have been killed, nearly 30,000 of whom were school children, and more than $2,000,000,000 worth of property has been damaged. A casualty now occurs on the roads every forty-two seconds. Fatigue caused more accidents than any other one factor, and perhaps explains why more accidents occurred between 4:30 and 5:30 in the afternoon than in any other two hours of the day. The association approved plans for a national highway safety campaign to be conducted under the direction of Thomas M. Upham, managing director of the association, and Paul L. Griffiths, Pittsburgh. The campaign will be carried into the schools, churches and civic organizations.

Device to Detect Mercury in Atmosphere.—The General Electric Company, Schenectady, N. Y., announces the development of a device which will detect, easily, one part of mercury in 20,000,000 parts of the atmosphere. In view of the increase in the industrial use of mercury, the device is considered important. The method is based on the reaction between selenium sulphide and the mercury vapor in the atmosphere by which a colored substance is produced that is observable to the eye. The yellow selenium sulphide is put on as a coating on paper, a continuous strip of which is drawn slowly over an opening through which the air flows, a small clock motor moving the strip at a uniform rate. The paper blackens on exposure to mercury vapor. The colored strip of paper is compared with a standard scale, and the different shades from yellow to black calibrated in terms of mercury concentration. With an incandescent lamp in front of the strip of paper and a photo-electric cell behind it, the amount of light reaching the cell will depend on the amount of blackening of the paper. The light thus regulates the readings of an ammeter, so that the concentration of the mercury vapor in the atmosphere can be determined either by observing the color of the paper or by reading the ammeter. The photo-electric cell circuit can be so arranged that when the concentration of mercury vapor becomes dangerously high, a gong will sound a warning.

Government Services

Admission Rates at Army Posts

The Surgeon General's Office has issued a bulletin giving by station the ten highest admission rates for disease for 1926. The highest rate was at Fort Slocum, N. Y. (1,146.5 per thousand); Fort Crook, Neb. (1,106.1); Fort Benjamin Harrison, Ind. (922.4); Fort Ringgold, N. M.; Fort Leavenworth, Kan.; Camp Holabird, Ga.; Fort Hayes, Columbus, Ohio; Fort Ontario, Oswego, N. Y.; Chanute Field, Rantoul, Ill., and Carlisle Barracks, Pa. (837). The highest admission rate among the corps areas was in the fifth, with headquarters at Fort Benjamin Harrison; the second highest in the seventh, and the lowest in the District of Washington. There was an increase in the admission rate from disease and from all causes over that for the two preceding years on account of an outbreak of respiratory diseases in the first three months of 1926, which appeared simultaneously in widely separated sections of the country. This epidemic was associated with a comparatively small increase in the number of deaths in the army, but it materially increased the mortality in the general population. The severest infection of the epidemic was at Fort Slocum, where there were twenty-five cases of primary pneumonia and five secondary with ten deaths. The barracks at this post were overcrowded during the period of the epidemic, the average strength of enlisted men being 1,775 in January; 2,140 in February and 1,791 in March, whereas the usual strength at Fort Slocum is about 1,200.

Changes in Personnel of Veterans' Bureau

The April *Medical Bulletin* of the U. S. Veterans' Bureau notes the following changes in the medical personnel:

Dr. Albert A. Ankenbrandt, transferred from hospital at West Haven, Conn., to regional office at New York.
Dr. Elda Martin Dings, resigned at Memphis, Tenn.
Dr. Charles E. Fitzsimmons, resigned at hospital, Kansas City, Mo.
Dr. Clement A. Fogerty, transferred from hospital at West Haven, Conn., to hospital at Kansas City, Mo.
Dr. David M. Gardner, transferred from hospital at Tacoma, Wash., to hospital at Algiers, La.
Dr. Henry L. Hayes, transferred from hospital at New Orleans, Section C, central board of appeals, to advisory group on appeals, central office.
Dr. Ernest A. F. Hirrschoff, transferred from hospital at Algiers, La., to hospital at St. Cloud, Minn.
Dr. John Q. Holifield, resigned at hospital at Perry Point, Md.
Dr. Charles W. Hughes, transferred from hospital at Muskogee, Okla., to hospital at Fort Snelling, Minn.
Dr. Curtis A. Hunsaker, appointed at hospital, North Chicago, Ill.
Dr. Grover C. Kirk, appointed at hospital, Washington, D. C
Dr. John M. Love, transferred from hospital at West Haven, Conn., to hospital at Outwood, Ky.
Dr. William J. Olds, appointed at hospital, Chillicothe, Ohio.
Dr. Antonio J. Rodriguez, transferred from St. Elizabeth's Hospital, to hospital at Tacoma, Wash.
Dr. Robert L. Russell, transferred from hospital at Fort Bayard, N. M., to hospital at Oteen, N. C.
Dr. Walter V. Spencer, transferred from hospital at Oteen, N. C., to hospital at Memphis, Tenn.
Dr. William S. Titus, appointed specialist in surgery at hospital at Boise, Idaho.

REGIONAL OFFICERS

Dr. Edgar P. Adams, resigned at Cleveland.
Dr. Robert F. Buehl, resigned at Indianapolis.
Dr. James F. Douglas, transferred from central board of appeals, New York, to central office.
Dr. Royal G. Grossman, resigned at Cleveland.
Dr. John H. Schroeder, resigned at Cincinnati.
Dr. Paul Sudhoff, appointed at diagnostic clinic, Cincinnati.

New Surgeon of Asiatic Fleet—Other Changes

Captain James S. Woodward, Jr., medical corps, who has been with the naval detachment at Constantinople, will assume the duties of fleet surgeon of the Asiatic fleet. Capt. Eugene J. Grow is to be assigned as assistant chief of the bureau of medicine and surgery, Washington, D. C., relieving Capt. Arthur W. Dunbar, who goes to command the naval hospital at Annapolis, and Capt. Robert M. Kennedy, now in command of that hospital will come to the navy department, relieving Capt. Edgar Thompson who goes to duty at the marine barracks in Washington; Commander Eugene A. Vickery goes from the naval war college on completion of the course to the U. S. S. *Richmond*, as surgeon of the naval forces in Europe. Commander Gardner E. Robertson goes to the naval hospital at Pearl Harbor; Lieut. Comdr. William W. Behlow to the naval hospital, New York, and Lieut. Comdr. James A. Brown to the naval hospital, Great Lakes, Ill. Lieut. Comdr. Robert T. Canon has withdrawn his resignation. The following officers have resigned: Lieuts. Robert F. Hague and Harry L. Reinhart.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 7, 1927.

Combating the Tsetse Fly in Nigeria

The government of Nigeria has been investigating for five years the tsetse fly problem. It is now known that there are several species of this vector, which is responsible for so much disease in man and animals in that colony. *Glossina morsitans* and *longipalpis*, game-feeding bush tsetse, inhibit the keeping of cattle and horses, while the riverine species *G. palpalis* and *tachinoides*, though dangerous to stock in the presence of game from which the virus of nagana is derived, are more harmful as the carriers of trypanosomiasis. In the wetter southern part of the country, almost everywhere at least two of these species may be found, frequently three of them, and in certain areas all four range together, the limiting factors in their detailed distribution being the type of forest that prevails and the abundance or otherwise of the wild ungulates.

The site of the investigation for the last four years has been at Sherifuri, in the angle between the Katagun and Kiyama rivers. During the first two of these years the whole time was devoted to a study of the flies in their normal habitat. Both species of tsetse present in the area, *G. morsitans* and *G. tachinoides*, have been collected week by week from various fixed points, and dissected to the number of more than 60,000. From the statistics accumulated, curves have been constructed representing the rise and fall of such factors as the abundance of the flies, their sex proportion, the amount and type of the blood they have imbibed, their state of well being as evidenced by their fat or lean condition, the rate of breeding given by the proportion of young flies, and their trypanosome infestation. All these factors show a normal annual rhythm which reflects the influence of the seasons on the prevalent water, the forest shade, and the local migrations of the wild fauna. If the normal conditions are changed, whether by removal of elements of the wild fauna, the cutting down of thicket, or the burning of grass at an unusual time, the normal rhythm of the curves is changed, in some cases profoundly, and in this way the effects of change may be estimated and compared on the basis given by the preliminary work.

The experiments that are being conducted fall under three heads: First, from one well defined fly focus the wild ungulates have been excluded by means of a fence of wire netting. The result has been that the thriving colony of *G. morsitans* that used to exist for the greater part of the year about the enclosed pool is now reduced to a few hungry flies, stragglers from the neighboring foci. The colony of *G. tachinoides* has also been much reduced, but the state of starvation so evident in the bush species is less evident in the riverine form because the latter feeds readily on reptiles. That morsitans would disappear together with the game is therefore proved, but it is not practicable to get rid of the game in thickest country without close settlement. For various reasons the investigators are not in favor of attempted game extermination, but take the view that no effort whatever should be made to foster and preserve the antelope in northern Nigeria. If they increase, as they are doing in some parts, they spread out into the cattle country, and *G. morsitans* moves with them. The antelope and pigs form the only important source from which the tsetse derives the virus that destroys domestic stock, and for this reason they should not be allowed to increase near the safe grazing grounds. The second line of inquiry is a study of the effects of sweeping grass fires, which may be induced by preserving the grass from burning till late in the dry season. Such fires certainly destroy a large number of tsetse and their pupae. Swynnerton, who first proposed this method of control, appears to be employing it with considerable success in Tanganika Territory. There the late fires enter and often burn out the thickets, but the massive fringing bush of northern Nigeria is hardly affected by such a procedure. Even if it is found that deferred grass burning is likely to be beneficial, it is doubtful whether the principle can be applied outside definitely reserved areas. The third method of control is clearing, but the difficulty is that it is desirable to preserve as much forest as possible. In their attempts to control by clearing, the investigators are therefore cutting down the minimum which they believe may be effective.

Physicians and Philosophical Studies

A joint letter over the names of leading men in the profession—Lord Dawson of Penn, Sir Thomas Horder, Sir Henry Head, T. W. Mitchell, William Brown and H. Crichton-Miller—appears in the medical press advocating philosophical studies for physicians. The signatories point out that there is evidence that what are termed generally philosophic studies would be of advantage to many physicians, both by expanding and by defining their outlook in relation to general or individual experiences and by affording assistance in the solution of practical difficulties. The need for clear thinking was never more apparent than it is today, when our expanded range of knowledge adds constantly to a stock of exact information, the bearings of which cannot be confined to any one branch of science but make themselves felt in every field. "What is it all about?" is a question that every well informed man asks himself when a mental problem, perhaps with a direct reference to action, presents itself to him in a form that is not dictated by his particular equipment. And the better informed he is, the more clear will it be to him that he needs fundamental guidance. In other words, he desires help in clear thinking. The recently formed British Institute of Philosophical Studies exists in order to afford this help to those who need it. The general object of the institute is "to bring leading exponents of various branches of philosophy into direct contact with the general public with the purpose of satisfying a need, felt by many men and women in every walk of life, for greater clearness and comprehensiveness of vision in human affairs." The signatories say that medical men and women are meeting many difficulties that are arising through the vast development of their science—developments of knowledge, of technic and of administration; these are being accompanied by a broadening of view in their ranks, and also by a multiplication of the relations of medicine to society brought about by far-reaching changes in the law. The position must therefore often arise when physicians need clearness and comprehensiveness of vision. They would benefit by an opportunity of taking counsel with those in other sections of activity, who may be meeting their own problems from a different angle or who may be able to give an opinion on medical problems which gains in breadth and public influence through its detachment from medicine. Further, medicine by cooperation can confer on those other sections of activity the advantages of sharing considered medical opinion and of learning the arguments relied on for its establishment. Sociological and psychologic questions arise constantly out of all medical practice and not only out of those sides of medical practice apparently concerned with mental disease or moral conduct, while metaphysics must play a part in any comprehensive attempt to distinguish between normal or abnormal conditions, physical or mental—indeed, between health and disease. A general philosophical equipment will

be of great use to the practitioner as a supplement to all scientific knowledge, for it will conduce to clear thinking. The signatories, therefore, advocate the claims, on members of the profession, of the British Institute of Philosophical Studies.

Arsenic on Apples

In connection with a recent case of prosecution of a greengrocer for selling American apples containing lead arsenate, a letter asking whether anything is now being done by American growers to safeguard the consumers was written by the secretary of the London Vegetarian Society to Mr. R. W. Dunlap, acting secretary of the Department of Agriculture, Washington. In reply, Mr. Dunlap states that the American fruit producing industry is fully alive to the necessity for eliminating dangerous quantities of spray residue on fruit and is working wholeheartedly with both federal and state governmental agencies who are concerned with this problem. Intensive studies designed to control the spray residue were made during the last producing season by both governmental and commercial agencies. While a great improvement in the condition of the crop was brought about, it was found that in certain areas of low rainfall, even the most careful restriction in the application of sprays, followed by brushing and wiping the fruit after harvest, left excessive quantities of residue on the fruit. This demonstrated clearly the necessity for employing other methods of removing spray residues than by brushing or wiping. Experimental work conducted last season in a number of localities where spray residue may be excessive at time of harvest has shown that by the use of certain dipping methods the fruit may be cleaned to a point at which the amount of residue will be well below the recognized tolerance. Steps are now being taken to advise the fruit producing industry in those regions where fruit cleaning is essential, of the equipment and processes necessary in the application of these methods, and everything possible will be done to bring about the installation of this equipment before the next packing season. It is expected that as a result of the combined effort of the fruit producing industry and interested governmental agencies, none of the fruit exported to Great Britain during the coming season will bear objectionable quantities of spray residue.

Illicit Drug Traffic

Startling disclosures of the international illicit drug traffic are made in the report of the League of Nations advisory committee which has been examining the traffic in opium and other dangerous drugs. The annual reports from governments show that the traffic is enormous. The outflow of opium from China in large amounts seriously embarrasses adjoining countries. Drugs are smuggled into the Far East in great quantities. In India the illicit drug traffic is said to amount to as much as forty times the legitimate imports. In the Far and Middle East large seizures have been made of drugs and of raw and prepared opium, while in Europe enormous quantities of drugs pass into the hands of illicit traders, and large seizures have also been made in the United States. The following cases were reported to the league during seven months of 1926. Transactions amounted to over sixty-five tons of raw opium, 3,520 ounces of heroin, 10,195 ounces of morphine and 625 ounces of cocaine. Seizures were made of 790 ounces of heroin, 350 ounces of cocaine, and 3,300 ounces of opium, while more recent seizures included single consignments of 4,410 ounces of morphine, fifteen barrels of morphine, 8,200 and 3,240 ounces of heroin, and of a consignment containing 2,100 ounces of morphine, 135 ounces of cocaine and 142 ounces of heroin. A report from the chief of the Cairo police states that the Egyptians are rapidly becoming a race of drug addicts in spite of the prosecution of 5,600 individuals during the year.

GENEVA

(From Our Regular Correspondent)

April 1, 1927.

Neuropathic States

A few months ago, the proceedings of the meeting of physicians and representatives of the federal administration held in 1925 were published. They bear the title "A Contribution to the Study, Treatment and Appreciation of Neuropathic States." The laudable aim of the chief army surgeons and surgeons of the Swiss railways was "to make uniform" the opinions of physicians and insurance companies in respect to certain neuropathic states frequent among the insured.

Dr. Repond questions whether it would not have been better to submit the problems discussed to the Psychiatric Society and the Neurologic Society. The results of such a preliminary study would have made an excellent starting point for a future meeting of experts. Unquestionably, the few specialists who took part in this meeting succeeded in defining some terms and concepts. Other ideas, although given out in a categorical manner, cannot be accepted, because they are not established. Such, for example, is the statement that schizophrenia is always an endogenous morbid process, and that any exogenous factor is incapable of provoking the development of this psychosis in patients in whom a simple pathologic predisposition exists. On the contrary, cases of schizophrenia having a more or less complete psychogenous or traumatic etiology are relatively rare, yet they do occur.

Spahlinger's Treatment

In the *Bulletin professionnel des médecins suisses*, April 1, appears a declaration, signed by Dr. H. Maillart, president of the Central Committee of the Federation of Swiss Physicians, and Dr. R. Garraux, secretary, of which the following is a translation:

"On account of the ever increasing requests for information received by Swiss physicians regarding Spahlinger's procedures of treatment of tuberculosis, especially from the profession of Great Britain, the Central Committee has decided to publish the following declaration:

"Mr. Spahlinger, of Geneva, licentiate in law, not being a physician, does not belong to the federation.

"The serums and vaccines that he says he has discovered for curing tuberculosis have only exceptionally been used by Swiss physicians and in Swiss people; at any rate the Swiss medical press has never published an article by Mr. Spahlinger, nor has anybody else, on his serums and vaccines, on their preparation, the way of preparing them or the therapeutic results obtained. Any control of these serums and vaccines and results obtained has therefore been impossible in Switzerland.

"Consequently, Mr. Spahlinger's methods have remained unknown to the great majority of Swiss physicians.

"The Central Committee, having demanded of the Medical Society of Geneva an opinion of Spahlinger's treatments, this society replied that it could not give any opinion. These methods never have been published in a sufficiently explicit way to be seriously discussed and the first explanation that Mr. Spahlinger made to the society, March 2, 1927, resulting from the reply to be made by the society, was in no way conclusive. The ideas which have served as a basis of his work and which he exposed at the meeting, were entirely theoretical and quite beyond control."

Botany in the Premedical Course

During the past year, reform of medical studies in Switzerland has been much discussed, more particularly at Zurich. Many maintain that the course is too long and to remedy

this it is proposed to eliminate the requirement for the student to pass examinations in botany and comparative anatomy. The utility of this university instruction for future physicians is even doubted. For thirty years Professor Chodat has been examiner of candidates for the federal diploma of medicine and therefore has been able to observe a considerable number of students and to follow them in their careers. In all his botany courses, Chodat keeps physics and chemistry in the foreground and puts them aside only when they become insufficient to express the phenomenon of life. But botany, in addition, trains the student to think biologically. To be sure, the medical student will find all this in his lectures on physiology, normal anatomy and embryology; but in order to grasp these subjects he should be in contact for not less than one year with the professors of botany and zoology (comparative anatomy). Chodat thinks that a meeting of all the Swiss professors of natural sciences should be called to discuss a minimum program for the teaching of subjects necessary for medical students. This program should be revised every five years. For thirty years Chodat has constantly revised his teaching to keep abreast of medical knowledge. Today medicine, like sociology, is showing renewed attention to heredity. It is easier to experiment on sweet peas, string beans and guinea-pigs than on the human being; hence the capital importance of botany and zoology in the study of heredity and sociology.

ITALY

(From Our Regular Correspondent)

April 5, 1927.

The Use of Immunizing Serums in Man

The *Gazzetta ufficiale del regno* has published a decree which imposes a penalty on the use in man, whether for diagnostic or for curative purposes, of vaccines, serums, viruses, toxins and like products, the manufacture of which has not yet been authorized by law. Such use is permitted solely in public institutes of a hospital character, and in public ambulatoriums authorized by the prefect, always under the responsibility of the director of the institute. Of such use the director must make an exact record, and must give a written notice to the head of the administration by which the institution is controlled. In the case of a public ambulatory, the health officer of the commune must be informed in writing. The health officer, in turn, must inform the provincial physician. On the basis of the report of the provincial physician, the prefect may prohibit the use of any immunizing products. The preparation of autovaccines must take place exclusively in institutes thereto authorized by the minister of the interior. Each year, under the supervision of the general management of the public health service, there will be published the list of immunizing products the sale and use of which are permitted.

Congress of Dermatology and Syphilology

Under the chairmanship of Prof. G. Bosellini, director of the Clinica dermosifilopatica at Rome, the Società italiana di dermatologia e sifilografia held its twenty-third congress.

THE THYROID GLAND IN DERMATOLOGY

The first main topic, the thyroid gland in dermatology, was divided into three parts, on each of which an official paper was presented. The first part was discussed by Professor Artom of Novara, and took up the function of the thyroid in general and its relations to the skin. After a general consideration of the subject he reported the results of some of his own researches on relationships between the thyroid and certain cutaneous diseases. The second subtopic, the influence of the thyroid on skin nutrition, was developed by Professor Bertaccini of Perugia, who concluded from the concordant evidence of physiology, experimental pathology and clinical observations that the thyroid exerts an influence on skin nutrition. Dealing with the third subtopic, altered thyroid functioning in relation to dermatoses, Dr. Sparaico of Rome discussed his personal series of fifty-nine cases of dermatosis, in thirty-six of which he found changed thyroid functioning.

BIOLOGIC TESTS IN GONOCOCCUS INFECTION

The second main topic was likewise divided into several subtopics, which were assigned to five different speakers. The first subtopic, the deviation of complement in gonorrhea, was presented by Dr. Buquicchio of Turin. The author reached the conclusion that, from the clinical standpoint, the gonorrhea test has only a relative value. The second subtopic, serologic examinations in gonococcus infections, was handled by Dr. Crosti of Milan, who pointed out that researches on the precipitin in the blood serum do not give results of high clinical value. The deviation of complement, in spite of its disadvantages, is a test of high practical clinical value. Dr. A. Mucci of Rome gave his conclusion, on the third topic, that the intradermal test is without practical value in gonorrhea. Dr. Peli of Rome, in dealing with the fourth subtopic, concluded that agglutination of the gonococcus in the blood serum of gonorrheal patients is without practical importance. In presenting the fifth subtopic, deviation of complement in gonorrheal disease, Dr. Spicca of Rome stated that this test, with modern polyvalent vaccines and the perfected technic, reveals the presence of gonorrheal antibodies in a very high percentage of cases, even though scarce and labile. In the discussion that followed, a resolution was drawn up by Professors Cappelli and Pasini and approved by the assembly, to the effect that, while the deviation of complement has a practical value as a biologic test in gonococcus infection, the necessity of a delicate and rigorous technic, which can be followed only in a scientific laboratory, precludes its more general use in a practical manner.

EXPERIMENTAL SYPHILIS IN THE LLAMA

The first part of the third main topic, experimental syphilis in the llama, had been assigned to Professor Bosellini of Rome. He directed attention to the researches of two Argentine physicians, Jaureguy and Lancelotti, according to which the llama showed itself not only receptive to human syphilis but also capable of supplying a therapeutic serum. A considerable number of llamas were presented by the Argentine government to the Accademia Medica of Rome, in order that the experiments of Jaureguy and Lancelotti might be repeated and controlled. At Rome experiments were carried out, at various times, on nine llamas, which were inoculated with syphilitic material. In some of the animals, at the points of inoculation there were reactions which, as it appeared to Bosellini, did not present the characters of syphilis. In none of them, up to the present time, have general signs been noted. In twenty-one of the animals (including the nine that were inoculated), serologic tests were carried out (Wassermann, Sachs, Georgi, Meinicke). There were some positive reactions, not only in those inoculated but also in the controls. A few intense positive reactions were observed in the controls. Bosellini recalls, therefore, that the blood of the llamas behaves toward biologic tests in much the same manner as that of other experimental animals; for example, the rabbit, in which various reactions are encountered. In summing up, Bosellini stated that nothing as yet justifies the belief that the inoculated animals are affected with syphilis. Professor Hoffmann of Bonn reached similar experimental conclusions. The second subtopic was developed by Professor Lombardo of Pisa, who reported on three series of inoculations carried out by Tornabuoni and himself on two adult llamas with human virus and with virus passed through the rabbit. Dur-

ing six months of observation, the investigators did not observe the development of reactions that would justify the assumption that the animals had contracted the disease. The Wassermann test was negative in every instance. The third subtopic was presented by Professor Pasini of Milan, who, following the inoculation of five llamas with human syphilis, did not observe evidence of the animals having developed the disease. Also, the Wassermann test gave only negative results. Pasini concludes, therefore, that the llama is not receptive to syphilis.

Exhibit of Hygiene Pertaining to Women and Children

At Turin, in the Parco del Valentino, there will be held, during the months of May, June and July, a special exhibit destined to disseminate the facts of modern hygiene pertaining to women and children. The exhibit, which is the first of the kind to be held in Italy, will be arranged in three principal sections as follows: 1. Women: the period of gestation; alimentary hygiene of the puerperium and the period of lactation; hygiene and beautification of the hair, the mouth and the body; the home medicine chest. 2. Children: general hygiene; rearing and management; prophylaxis and sanitary equipment. 3. The home: heating, lighting, ventilation, sanitary installations. Other features will include: the kitchen and the preparation of food; woman's work (midwife, nurse, wetnurse, children's maid); after-labor; school hygiene; rural hygiene, and the hygiene of travel.

PARIS

(From Our Regular Correspondent)

April 20, 1927.

Thrombo-Angiitis Obliterans

Dr. Guillaume endeavors to establish in a recent communication that Buerger's disease, or thrombo-angiitis obliterans, is not a morbid entity. According to Guillaume, it is merely a juvenile type, already known, of arteritis obliterans, previously referred to by Friedländer (1876), von Winiwarter, Zoege von Manteuffel, Dutil and Lamy, and described by Camuset in 1902 under the name of "spontaneous arteritis." It is by no means peculiar to the Jewish race and is not of infectious origin. The disease dates back most commonly to a simple arteritis. Examination of amputated parts shows that, contrary to the opinion of Buerger, there are primary lesions of endarteritis, and that it is these lesions that are the starting point of thrombosis. The veins reveal significant parietal lesions independent of thrombosis. With advancing age these forms develop in the direction of ordinary arteriosclerosis, which is the only type found in aged persons.

The Sixth French Congress of Protection Against Tuberculosis

The sixth French Congress of Protection Against Tuberculosis, held at Lyons, April 11-14, was attended by more than 900 members of the society. The session was presided over by Dr. Mouisset, while Professor Arloing served as general secretary. The congress was opened by M. Herriot, mayor of Lyons and minister of public instruction, who called attention to the double aspect, scientific and social, of tuberculosis. He emphasized the social aspect, and said that the problem of hygienic housing, an abundant meat diet and physical education constituted the prime factors in the prophylaxis of tuberculosis. Professor Mouisset gave a short address of welcome to the conventionists, among whom were a number of foreign physicians: Demiéville, De Peyer, Jacquerod and Roux, from Switzerland, and Grossi and Vecchi from Italy, together with representatives from Spain, Belgium and the Netherlands.

The first topic on the program, the experimental bases of allergic reactions in tuberculous infection, was the subject of a comprehensive paper by Prof. Paul Courmont of Lyons, and was followed by an animated discussion. The second topic, factors of terrain other than allergy, was treated by Professor Sergent and Dr. Turpin of Paris. The same day, there was a plenary session of the administrative committee of the Conseil national de defénse contre la tuberculose, presided over by Professor Calmette, and also of the administrative committee of the Oeuvre de la tuberculose. The day closed with the dedication of the antituberculosis dispensary at Oullins, of the preventorium at Charly, and of the hospital-sanatoriums of Perron and Ste. Eugénie.

The second day was devoted to the discussion of two other topics. One was thoracoplasty in the treatment of pulmonary tuberculosis, which was handled by Professor Bérard of Lyons and Dr. Dumarest of the Sanatorium d'Hauteville. They presented numerous patients who had undergone thoracoplasty with success, together with roentgenograms and lantern slides, and formulated the indications and the operative technic that are most likely to give good results in this method. Professor Saye of Barcelona, MM. Ameuille and Ladennois of Paris, M. Toussaint of Lausanne, and Professor Roux of Lausanne, discussed the same subject and approved the conclusions of Bérard and Dumarest. The second topic of the day was the semeiologic value of the bacteriologic examination of the sputum in pulmonary tuberculosis, and was presented by M. Cordier of Lyons. Numerous communications on the same subject followed, to mention, more particularly, those of MM. Bezançon, Sergent, Guinard of Paris, F. Arloing and Thévenot of Lyons, Dumarest of Hauteville, and Jullien of Grenoble. At the close of the day, visits were paid to the preventorium of Cuire, the open-air boarding school of Vernay, and the Maison d'Hygiène of Chaux.

The third day was devoted to antituberculosis societies. At the morning session, Dr. Poix of Paris gave an account of the present status of the two most important factors for the protection of children against tuberculosis: the preventorium and placement in healthy families. The preventoriums, adapted for children affected with light and curable forms of the disease but who are not contagious, comprise at present 150 institutions with more than 10,000 beds. Placement in healthy families is accomplished through the Grancher society, healthy children being removed from contagious surroundings and placed in suitable families residing in the rural sections. Collaboration of the medical profession with the dispensaries was discussed by M. Jacques Parisot of Nancy. A meeting of the Société de médecins de sanatoriums et des dispensaires d'hygiène sociale was then held. In the afternoon, the congress listened to three papers presented by women: (1) Mlle. Delagrange of Paris, who spoke on the social rôle of the departmental chief woman nurse; (2) Madame Delafontaine of Paris, who dealt with the importance of initiative in the work of visiting nurses in the antituberculosis campaign, and (3) Mlle. Hervé of Rouen, who stressed the importance of hospital training for visiting nurses in the field of social hygiene.

The congress was a genuine success. It was decided to hold the next national antituberculosis congress at Bordeaux in 1930.

First-Aid Stations Along the Highways

A committee of the Touring Club of France is establishing on the Paris-Deauville route thirty first-aid stations, provided with a permanent personnel and direct telephonic communication with the nearest surgeon. Since this highway is kept in excellent condition it is a temptation to speeding, and accidents are frequent. If the results of the experiment justify the expenditure of funds, similar equipment will be provided for other highways.

BUDAPEST

(From Our Regular Correspondent)

April 14, 1927.

Importance of Obstetric Clinics in the Fight Against Syphilis

Dr. Francis Kovács of Budapest, in a paper read before the Budapest Royal Medical Society, said that, in the fight against syphilis, genital syphilis is the point of attack. Syphilitic mothers must be treated in ample time. It is therefore the task of the obstetric clinics and infants' homes, which are in touch with many mothers, to prevent the conveying of infection to the new generation. This end can be best achieved by searching for syphilitic infection in every case. These examinations, the Wassermann test, histologic examination of the placenta, roentgen-ray examination, sedimentation of red blood cells and postmortem examinations made by experts demand that all institutions dealing with pregnant women should be supplied with adequate laboratory service. If one of the analyses is positive, antisyphilitic treatment of the woman must be started, even if clinical manifestations are absent and without regard to the progress of gestation.

Lactation

Professor Preisich recently discussed the technic of lactation before the Interhospital Medical Association. He said that lactation does not as a rule necessitate artificial preparation of the nipple. These procedures tend to dry the nipple, harden it and render it inclined to cracks and fissures. Badly formed nipples and insufficiency of the ducts are in most cases due to mastitis of childhood. Therefore, due care must be taken in childhood to treat such mastitis adequately. Some breasts give milk abundantly, others in average quantity, and still others in small quantity. Also, a distinction must be made between breasts with easy and with difficult flow of milk. The former are rather dependent on constitution, nutrition and general health, the latter to the decreased number of ducts and to their contracted lumens. Much more often lactation is influenced by spasmodic contraction of the sphincteric musculature of the ducts than by their anatomic structure.

Opposition by Hungarian Medical Association to Constitution of New Sickness Societies

Economic difficulties prevailing in Hungary have resulted in a decrease of private medical practice. Although the medical profession hastened to alleviate the position of sick people by reducing fees, still, the only paying class, the merchants and better craftsmen, have resolved to establish a sickness society, in order to lessen the costs of medical attendance. Under the well sounding phrase "Let us save the middle class," the new society attracted thousands of members and intended to employ, with excellent salaries, a very few physicians. Seeing this abuse, the medical association adopted a unanimous resolution according to which the entering into a contract relation as attending physician with any new sickness society is regarded as unethical, and offenders are excluded from membership in the association. Members of the association are allowed to continue their relations with sickness societies that were established long ago if they are working under the terms of their original contracts and if the respective societies do not extend their membership.

Ingenious Method of Educating Children in Hygiene

Dr. János Follmann, district medical officer in Gyula, Hungary, teacher of hygiene in the secondary school, suggested to the teachers of arithmetic, in all classes, to give problems which at the same time that they give practice in arithmetic may automatically convey to their minds some elementary knowledge of hygiene. For instance, in 1911 of every 100,000 inhabitants of Hungary, 358 died of tuberculosis; in France, 218; in Germany, 158; in Italy, 192; in the United States, 159; in England, 147. How many inhabitants of Hungary, France, Germany, Italy, and the United States of America succumbed to tuberculosis in 1911? In 1912, of every 1,000 infants under 1 year of age, 91 died in London, 103 in Paris, 142 in Berlin, 149 in Vienna, and 141 in Budapest. How many infants died in all of these capitals combined? The educating effect of such and similar examples does not need any accentuation.

BELGIUM

(From Our Regular Correspondent)

March 8, 1927.

Postgraduate Medical Instruction

Various attempts to organize postgraduate medical instruction have been made in many countries. The plan usually is to provide courses during the academic vacations, with the idea of furnishing general practitioners with a survey of recent progress in medicine in a more practical and more tangible manner than through textbooks or the medical press. It was on that principle that the so-called *journées médicales* in Brussels were organized. These sessions have become the national medical convention of Belgium and have acquired a measure of international fame. In a more restricted sense, the various medical schools organize courses with clinical demonstrations and practical exercises, such as are calculated to benefit the specialist. In the near future, the Faculty of Medicine of Brussels plans to give a course of theoretical and practical lectures on mental medicine, medicolegal psychiatry and abnormal children, in connection with visits at various institutions, hostels and prisons. The Faculty of Medicine of Liége had likewise undertaken the organization of postgraduate courses, which were also given during vacations. But those were isolated efforts, which did not result in any continuity or regular organization.

However, a movement that was organized during the war has been taken up again; namely, that of the medical graduates of the University of Louvain. A short course was organized in December of last year, during which the leading professors gave lectures on the principal problems interesting medical practitioners. Following that short session, the members present voted to reestablish the medical alumni association of the University of Louvain. The association has a double purpose: it affords the alumni a chance to get together occasionally and renew old acquaintances, and it offers all an opportunity to become rapidly informed in regard to the principal questions being discussed in the fields of medicine and science. The association has decided to hold two meetings each year, one in summer and one in winter. In the intervals, connections are kept up by the medical review of Louvain, which reflects the instruction in the Faculty of Medicine. In order to make this national organization effective and to attract the largest number of physicians, the organizing committee, in addition to the organizers proper, includes two delegates from each province. This will assure a connection with the physicians residing in the more remote centers.

Diphtheria Mortality and Inoculation

Reference has been made to the action taken by the minister of health with regard to the suppression of the gratuitous distribution of antidiphtheritic serum. The action was dictated by reasons of economy, in view of the marked decline in diphtheria mortality. During the five-year period 1919-1923, the mortality rate from diphtheria decreased steadily. Basing his views on the steady decrease but also on the fact that danger still exists, Dr. Fonteyne has pub-

lished in the *Scalpel* a study on antidiphtheria vaccination in which he recommends systematic inoculation with anatoxin in a manner similar to vaccination against smallpox. If that could be accomplished, in a few years diphtheria would disappear from the country.

Vocational Guidance

The Institut des hautes études de Belgique has organized theoretical and practical courses of instruction in vocational guidance for the training of vocational advisers. The course of instruction covers one year. At the conclusion of the course an examination will be given, and on passing such examination students will receive a diploma in vocational guidance. Such a diploma will entitle the holder to special consideration for the post of vocational adviser.

Internment of Mental Patients

The carelessness toward mental patients as still shown by the administrations of most institutions is to be deplored. In fact, aside from the two large cities Brussels and Antwerp, which have a psychiatric service, mental patients are interned directly through the communal administration, and the burgomaster assumes the responsibility of sending them to a psychopathic hospital after a medical examination that is of necessity summary and superficial. In an article in the *Bruxelles Médical*, Dr. Fontaine-Vincent recommends the establishment in each province of a service of general diagnosis attached to the main hospital, provided with a laboratory and equipped with specialists. No mental patient should be interned in a psychopathic hospital without having been examined by experts.

Organization of the Army Medical Department

Since the war, until recently, the medical department of the army had been divided into four subdepartments, each independent of the other, and attached to the four army corps, respectively. The army medical department had no longer a responsible head but depended exclusively on the minister of national defense. The splitting of the department into four independent parts has now been abandoned. The *Moniteur Belge* has just published the new order issued by the minister of national defense, reestablishing the autonomy of the army medical service, and placing it in the hands of a single responsible head, a surgeon general, who bears the title "inspecteur général."

Terminal Disinfection

There has been much discussion in recent years as to the utility of the disinfection of rooms after a contagious disease. The Academy of Medicine of Belgium has taken up the question anew. Mr. Haibe pointed out that, in combating contagious diseases in general, disinfection during the course of the disease is by far the most important. But, until disinfection during the disease has become more general and more effective, terminal disinfection should not be abandoned.

Cruises for Medical Students

The *Bruxelles Médical* is organizing another special cruise for medical students to take place in August. The medical students of all the universities may register their friends in the other faculties. Parents of the students will be accepted, either at the same rate as the students or at a higher schedule. The cruise will cover the following itinerary: Marseilles, Monte Carlo, Genoa, Naples, Palermo, Algiers, Ajaccio, Marseilles.

A more extensive international cruise for students is to be organized for the same period (August). The one charge of $160 includes all expenditures at sea and in Sicily, Greece, Turkey, Syria, Palestine and Egypt. The tour will cover about one month.

BERLIN

(From Our Regular Correspondent)

April 23, 1927.

Vital Statistics of the Large Cities of Germany in 1926

In 1926, there were, in the large cities of Germany, 143,920 marriages (8.5 per thousand inhabitants), 240,275 living births (14.1 per thousand inhabitants), and 174,268 deaths (10.3 per thousand inhabitants). The number of marriages in 1926 was not much greater than in 1925 but showed a marked increase over 1924. The birth rate, which in 1925 after the marked decline extending into the second half of 1924 had increased from 14.1 up to 14.7 living births per thousand inhabitants, dropped back again in 1926 to the low status of 1924. However, the number of illegitimate births in 1926 showed no decrease over 1925 but, during the last months of the year, rather an increase; so that, since 1924, the percentage of illegitimate living births has increased from 12.0 to 14.7, whereas the number of legitimate living births (12.0 per thousand population) has decreased by 0.6 and 0.4 per thousand, respectively, as compared with 1925 and 1924.

Owing doubtless in part to the cool summer and the warm winter temperatures, and in spite of the unusual dampness that prevailed (except in April, August, September and December), the general mortality in 1926 (10.3 per thousand inhabitants) was 0.1 and 0.4, respectively, below that of 1925 and that of 1924, which were already distinguished by their especially low mortality. Not only the birth rate but also the death rate, during the course of the year, showed a rather uniform decline, as compared with the average rate for previous years. The decline in mortality since 1924, except for an increase in the 40-60 age-group in 1925 and in the 60-100 age-group in 1926, was steady in all age-groups, but most marked, in 1925, in the 15-20 age-group, and, in 1926, in the young children group.

The epidemic of typhoid in Hanover caused around 250 deaths, in addition to which there were 230 further deaths from typhoid in the other large cities. Deaths from scarlet fever and whooping cough showed a slight increase, whereas deaths from other infectious diseases in general, even including influenza, decreased.

A decisive influence on the general mortality is exerted by the constantly decreasing number of deaths from tuberculosis. The decrease in 1926 over 1925 was more marked among children under age 15 than in older age-groups.

While the number of deaths from cancer and other malignant neoplasms showed few changes in 1926, cerebral hemorrhage and cardiac diseases were responsible for a somewhat greater mortality than usual.

The mortality from puerperal fever showed a decrease in 1926, especially in the second half of the year, and, particularly, the incidence following miscarriages. Suicide increased during the first half of the year, but in the second half there was a perceptible decline. Another factor that contributed to the low death rate was the marked decrease in the number of fatal accidents in the large cities.

A Protest Against the Publication of Physicians' Pictures

In a number of German daily journals and illustrated periodicals the bad custom has been spreading of late of publishing, without due reason, pictures of physicians. At the instance of the directors of the Vereinigung der medizinischen Fachpresse, and, more particularly, of its chairman, Professor Schwalbe, the Berliner Medizinische Gesellschaft has issued the following declaration:

The Berliner Medizinische Gesellschaft expects its members to prevent so far as they are able the publication of their pictures for advertising purposes in journals.

Marriages

ALBERT E. TRITES, Ladysmith, B. C., to Miss D. Weir of Montreal, Que., at Vancouver, February 28.

MAURICE N. ROSENBERG, Minneapolis, to Miss Ruth Barbara Goodman of El Paso, Texas, May 19.

HENRY BEECHUM BURDESHAW, Dothan, Ala., to Miss Pauline Byrd of Enterprise, April 14.

Deaths

Arnold Leon Jacoby, Detroit; University of Michigan Medical School, Ann Arbor, 1910; member of the American Psychiatric Association, the Central Neuropsychiatric Association, the American Orthopsychiatric Association and the Michigan State Medical Society; professor of psychiatry Detroit College of Medicine and Surgery, and formerly instructor in psychiatry at his alma mater; on the staff of the Harper Hospital, Detroit, and at one time on the staff of the State Psychopathic Hospital, Ann Arbor; appointed to inaugurate the Psychopathic Clinic, Recorder's Court, in 1921; served in the U. S. Navy during the World War; aged 41; died, April 30, at Springfield, Mass., of peritonitis following appendicitis.

Ernest Alden Wells ✠ Hartford, Conn.; Johns Hopkins University Medical Department, Baltimore, 1901; past president of the Hartford County Medical Society; secretary of the New England Surgical Society; on the staffs of the Hartford, Mount Sinai and St. Francis hospitals and the Hartford Retreat for Insane, Hartford, the New Britain (Conn.) General Hospital and the Manchester Memorial Hospital, South Manchester; aged 51; died, April 15, following an operation for appendicitis and cholecystitis.

Henry Withington Bradford ✠ Wolfeboro, N. H.; Medical School of Harvard University, Boston, 1875; member of the Massachusetts Medical Society and the New England Ophthalmological Society; on the staff of the Huggins Hospital; formerly on the staff of the Massachusetts Charitable Eye and Ear Infirmary, Boston; aged 75; died recently, of diabetes mellitus and pneumonia.

Stephen Walter Woodyard ✠ Greeneville, Tenn.; College of Physicians and Surgeons, Baltimore, 1891; member of the state board of medical examiners, 1913-1917; health officer of Greene County, 1899-1904; member of the House of Delegates of the American Medical Association, 1907-1908; examiner, U. S. Public Health Service, 1919-1920; aged 58; died, February 19.

Seymour Basch ✠ New York; Medical Department of the University of the City of New York, 1894; member of the American Gastro-Enterological Association; formerly professor of clinical medicine, Fordham University School of Medicine; on the staff of the Lebanon Hospital and at one time on the staff of Mount Sinai Hospital; aged 55; died, April 26.

George Thomas Tuttle ✠ Milton, Mass.; Medical School of Harvard University, Boston, 1878; member of the American Psychiatric Association and the New England Society of Psychiatry; formerly clinical instructor in psychiatry at his alma mater; at one time superintendent of the McLean Hospital, Waverley; aged 76; died recently, of pneumonia.

Robert Ferguson, London, Ont., Canada; University of Western Ontario Medical School, London, 1890; professor and chief of the department of obstetrics and gynecology at his alma mater; for more than twenty years coroner; aged 72; died, in April, of dilatation of the heart.

Philip Briscoe ✠ Mutual, Md.; College of Physicians and Surgeons, Baltimore, 1880; past president of the Medical and Chirurgical Faculty of Maryland and the Calvert County Medical Society; aged 72; died, May 4, at the Mercy Hospital, Baltimore, of pneumonia.

Robert Moses Littell, Opelousas, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1885; member of the Louisiana State Medical Association; aged 65; died recently, at the Eunice (La.) Sanatorium, of mitral insufficiency and diabetes.

Lubin Winfred Sayles, Baraboo, Wis.; Rush Medical College, Chicago, 1893; member of the State Medical Association of Wisconsin; aged 57; died, April 11, at the Wisconsin General Hospital, Madison, of epidemic (lethargic) encephalitis.

George Hampton Putney, Great Falls, Mont.; University of Michigan Medical School, Ann Arbor, 1897; member of the Medical Association of Montana; served during the World War; aged 53; died, April 27, at Palo Alto, Calif.

Virgil H. Lilly, McSherrystown, Pa.; University of Maryland School of Medicine, Baltimore, 1869; formerly justice of the peace; aged 81; died, in April, at the Hanover (Pa.) General Hospital, of injuries received in a fall.

Henry Bernard Kauffman, Washington, D. C.; Georgetown University School of Medicine, Washington, 1894; connected with the U. S. Veterans' Bureau; served during the World War; aged 52; died, April 29, of heart disease.

Jane Wall Carroll ✠ Paterson, N. J.; University of Buffalo Department of Medicine, 1891; also a lawyer; member of the Medical Society of the State of New York; aged 79; died recently, at Rome, Italy, of heart disease.

Andrew Victor Stephenson, Long Beach, Calif.; University of Nebraska College of Medicine, Omaha, 1896; member of the California Medical Association; veteran of the Spanish-American War; aged 57; died, March 24.

William H. Broomfield, Mound Bayou, Miss.; Meharry Medical College, Nashville, Tenn., 1902; aged 43; died, in April, of injuries received when the automobile in which he was driving was struck by a train.

M. J. Pirtle, Caddo, Okla. (registered, Oklahoma, by the state board of health, under the act of 1908); aged 61; died recently, of injuries received when the automobile in which he was driving overturned.

Frederick Thomas Simpson ✠ Hartford, Conn.; Medical School of Maine, Portland, 1884; on the staff of the Hartford Hospital and physician to the State Prison; aged 69; was found dead, May 4.

Elmer Thomas Sharpe ✠ Derby, Conn.; Medical Department of the University of the City of New York, 1895; member of the Florida Medical Association; aged 53; died, April 21, of erysipelas.

Leonard Samuel Wood ✠ Miami, Ariz.; Hahnemann Medical College and Hospital, Chicago, 1913; on the staff of the Gila County Hospital, Globe; aged 37; died, April 22, in Globe, of pneumonia.

William Lowe Stringer, Falkville, Ala.; Chattanooga Medical College, 1904; member of the Medical Association of the State of Alabama; aged 46; died suddenly, April 25, of cerebral hemorrhage.

Albert C. Baker, Spokane, Wash.; Kansas City (Mo.) Medical College, 1901; member of the Washington State Medical Association; aged 51; died, in April, of carcinoma of the pancreas.

William B. Collins, Lovelady, Texas; Kentucky School of Medicine, Louisville, 1885; member of the State Medical Association of Texas; formerly state health officer; aged 64; died, April 21.

William Thompson Redmond, Crockett Mills, Tenn.; Memphis Hospital Medical College, 1898; also a druggist; aged 59; died, April 21, at the Methodist Hospital, Memphis, of heart disease.

Porter Spaulding Kinne, Paterson, N. J.; New York Homeopathic Medical College, 1872; member of the Medical Society of New Jersey; aged 77; died, April 25, of chronic myocarditis.

George M. Nichols, Higbee, Mo.; College of Physicians and Surgeons, Keokuk, 1886; member of the Missouri State Medical Association; aged 66; died, March 24, at a hospital in Moberly.

Charles Edwin Bowers, Wichita, Kan.; Rush Medical College, Chicago, 1883; member of the Western Surgical Association; on the staff of St. Francis Hospital; aged 71; died, March 23.

Charles Sterling White, Winston-Salem, N. C.; Medical College of Virginia, Richmond, 1925; aged 25; died, April 18, at a local hospital, of injuries received in an automobile accident.

Henry Edgar Southworth ✠ Los Angeles; Cooper Medical College, San Francisco, 1900; formerly coroner and health officer of San Joaquin County; aged 56; died suddenly, April 28.

William C. Park ✠ Grafton, Ohio; Western Reserve University School of Medicine, 1902; aged 49; died, April 18, at the Elyria (Ohio) Memorial Hospital, of chronic nephritis.

Robert L. Harris, Jacksonville, Fla.; Medical College of Ohio, Cincinnati, 1882; member of the Florida Medical Association; aged 68; died suddenly, April 26, of heart disease.

John Edward Daly, Ulster, Pa.; Medico-Chirurgical College of Philadelphia, 1905; member of the Medical Society of the State of Pennsylvania; aged 51; died, February 10.

William A. Driver, Chicago; Illinois Medical College, Chicago, 1909; aged 50; died, April 6, at the Providence Hospital, of injuries received in an automobile accident.

Perry Delphos Kelly, Nemaha, Neb.; Ensworth Medical College, St. Joseph, Mo., 1893; aged 56; died, March 21, following an operation for carcinoma of the stomach.

Robert Miller Coulter, Ottawa, Ont., Canada; University of Toronto Faculty of Medicine, 1882; formerly deputy postmaster general of Canada; died, in February.

Martin M. Stiles, Walla Walla, Wash.; Bennett College of Eclectic Medicine and Surgery, 1881; formerly city and county health officer; aged 73; died recently.

Fred E. Lawson, Hedrick, Iowa; Keokuk Medical College, 1900; member of the Iowa State Medical Society; aged 52; died, in March, at a hospital in Ottumwa.

George J. Damon, Medina, Ohio; Cleveland University of Medicine and Surgery, 1876; aged 69; died, April 28, at the Grace Hospital, Cleveland, of nephritis.

Walter Scott Hall, Los Angeles; College of Physicians and Surgeons, Keokuk, 1877; aged 80; died, February 26, at the County Farm, of cerebral hemorrhage.

Joseph Hugh French, Greenville, Texas; College of Physicians and Surgeons, Keokuk, 1879; county health officer; aged 82; died, April 16, of aphasia.

Oscar Henley Snider, Atlanta, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1887; aged 61; died, April 15, at a local hospital.

William T. Brown, Atlanta, Ga.; Atlanta Medical College, 1876; member of the Medical Association of Georgia; aged 74; died, April 2, of myocarditis.

Melvin Newton Gardner ✠ Greenleaf, Kan.; University of Michigan Medical School, Ann Arbor, 1883; aged 69; died, April 6, of angina pectoris.

Ralph G. Yeaton ✠ Brooklyn; New York Homeopathic Medical College and Flower Hospital, New York, 1909; aged 42; died, April 30.

Albert F. Fitch, Chicago; Illinois Medical College, Chicago, 1902; aged 68; died, April 25, of lobar pneumonia and chronic myocarditis.

George W. B. Smith, Rodman, N. Y.; Hahnemann Medical College and Hospital, Chicago, 1882; aged 70; died, April 4, of arteriosclerosis.

Ellis H. Sparling, Chicago; Chicago Homeopathic Medical College, 1884; aged 84; died, May 8, of carcinoma of the prostate gland.

Gilman Pitt Evans, Baltimore; Baltimore Medical College, 1895; aged 69; died, April 18, of chronic nephritis and myocarditis.

George Haylett Brett, Williamston, Mich.; University of Michigan Medical School, Ann Arbor, 1885; aged 67; died, March 21.

George Miller, St. Marys, Kan.; University of Pennsylvania School of Medicine, Philadelphia, 1878; aged 72; died, April 22.

Joseph V. Klock, Mahanoy City, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1895; aged 53; died, April 25.

James E. George, Rockwood, Tenn.; Bellevue Hospital Medical College, New York, 1883; aged 70; died, April 11.

James Arthur Wilson, Guelph, Ont., Canada; University of Toronto Faculty of Medicine, 1892; died, February 22.

William B. McClure, Chattanooga, Tenn. (licensed, Tennessee, 1910); aged 77; died, in April, at Orlando, Fla.

Isaiah A. Macon, Rock Hill, S. C.; Leonard Medical School, Raleigh, N. C., 1895; aged 57; died, March 30.

Joseph Walk Irwin, Louisville, Ky.; Jefferson Medical College of Philadelphia, 1873; aged 76; died, in April.

James Aldrich King ✠ Woonsocket, R. I.; Medical School of Maine, Portland, 1900; aged 46; died, April 22.

Orwin Cullen Hawkins, Biggs, Calif.; St. Louis Medical College, 1871; aged 76; died, in April.

Cullen P. Wolf, Massillon, Ohio; Cleveland Medical College, 1874; aged 77; died, April 25.

Correspondence

MERCUROCHROME IN NOSE AND THROAT

To the Editor:—Apropos of the recent article in THE JOURNAL (April 30, p. 1391) by Earl B. McKinley and Margaret Holden on the dangers attending the intraspinal injection of mercurochrome, allow me to voice my own opposition to the prevalent use of this remedy in the treatment of nose and throat conditions, especially in children. It has become the almost universal practice in this part of the country to use various strength solutions of mercurochrome in the treatment of acute pharyngeal conditions and acute cold in the head. Mothers are now dropping solutions of this remedy in the nasal cavities of young children just as they previously had done with mild silver protein solutions, and in some instances even sprays have been used.

I have recently seen two cases in which I am sure this remedy produced a decided toxic effect from its use in the nose. Small children and even adults cannot help but swallow a large amount of any liquid dropped into the nose and allowed to run back into the nasopharynx. I feel that a note of warning should be sounded as to the danger in flooding the nasal cavities with a mercurochrome solution.

DUNBAR ROY, M.D., Atlanta, Ga.

SPECIAL LENS FOR HEAD MIRROR

To the Editor:—To overcome the disadvantages of presbyopia, many otolaryngologists must change from their ordinary street glasses to their near vision ones, or use a device sold by the instrument makers consisting of a clip to hold a small lens, which clip is attached to the head mirror by three hooks, one in the sight hole and two on the periphery of the head mirror. This is a very handy device, but unfortunately it often slips at most inopportune moments. To overcome this I had a one centimeter lens plus 2 D. spheres made which I fastened by sealing wax, which is permanent but not neat. A few days ago I had the Uhleman Optical Company grind down my presbyopic correction lens to fit the sight hole and it is such a beautiful, neat and permanent job that I want to pass the information on to others like myself.

EDWARD J. BERNSTEIN, M.D., Detroit.

"TISSUE HYPERSENSITIVENESS FOLLOWING TOXIN-ANTITOXIN"

To the Editor:—In THE JOURNAL, April 2, is an article by Drs. Gatewood and Baldridge on "tissue hypersensitiveness following the administration of toxin-antitoxin (phenomenon of Arthus)."

The question of whether toxin-antitoxin with its minute amount of antitoxic globulin sensitizes individuals to such a degree that they develop accelerated or more serious serum reactions when they receive a later dose of serum is one of such importance that in reporting cases we should be careful to be certain to give suitable emphasis to the different factors involved. The patient showing severe symptoms with the second dose of antitoxin gave the following history: She had a negative Schick test in January, 1925, but in spite of this received three injections of toxin-antitoxin in February. In November, 1925, she had an acute infection involving the ethmoid, sphenoid and maxillary sinuses. There was also an acute adenitis. November 27, cultures from the nose contained many organisms, morphologically typical of diphtheria bacilli; the nares were filled with crustations resembling diphtheritic membrane, and a diagnosis of nasal diphtheria

was made. A desensitizing dose of a few minims of antitoxin was injected beneath the skin of the right arm without reaction. Thirty minutes later an intramuscular dose of 20,000 units was given into the right hip. An immediate reaction did not occur. During the following three days the appearance of the nares changed but little. December 3, the maxillary sinuses were punctured. On the afternoon of December 3, six days after the antitoxin, there suddenly developed an acute, very marked and generalized enlargement of the superficial lymph nodes. The next day the sites of serum injection, in the right arm and thigh, were markedly swollen, red and tender. Cultures for diphtheria taken, December 3, and again, December 4, contained many diphtheria organisms. On the afternoon of December 5, the soft palate and uvula became edematous, but there was no pseudomembrane. At 8:30 a desensitizing dose of antitoxin was given in the arm. No immediate reaction developed, and at 9 o'clock 40,000 units of antitoxin was given intramuscularly in the left hip. Three hours after the injection, the hip and arm were greatly swollen. "The local appearance of the thigh and arm remained about the same for two days, except that the edema and redness gradually spread until the whole thigh and arm were involved and each was twice the size of its fellow. On the third day, the area which had been blanched began to take on the mottled appearance of extravascular blood. The temperature was of the septic type. On the fifth day following injection, an incision was made into the mass on the outer aspect of the left thigh. There was tissue necrosis, but frank pus was absent. A serosanguineous discharge containing necrotic tissue and many fat droplets started soon after the incision." The patient made a slow recovery.

The comments I wish to make on this article are the following: In the first place, the patient had a negative Schick test and following that three immunizing injections of toxin-antitoxin, so that it is difficult to believe she had diphtheria. Her symptoms were those of a septic infection of the head sinuses. There was apparently no test made for virulence of the diphtheria-like bacilli. In my opinion, it is impossible to conceive of a case of diphtheria showing the symptoms here related that would continue for eight days after 20,000 units of antitoxin had been given without any change in the local condition. That diphtheria-like bacilli were found, whether virulent or not, was not sufficient reason in such a case to make a diagnosis of diphtheria or to give a second dose of 40,000 units of antitoxin.

From my point of view, the more important observation is that the first dose of 20,000 units of serum was not followed by an accelerated reaction, which would certainly have been true if the patient had been sensitized by the toxin-antitoxin. There is nothing unusual in the fact that on the sixth day rather severe serum sickness developed, showing both local and constitutional symptoms. On the ninth day, a second large dose of antitoxic serum was given which showed an accelerated reaction and much more severe local symptoms, and developed the extremely rare condition of necrosis in the involved area. As the first injection of antitoxic serum did not produce these symptoms, it is certainly only reasonable to consider that the more severe reaction of the second injection was due to the sensitizing effect of the first dose of serum given eight days before. This is not an infrequent occurrence.

It seems to me, therefore, that there is no reason to attribute the accident to the toxin-antitoxin injections. When so many infants and children are receiving toxin-antitoxin or toxoid, there must be a certain number of children who later develop symptoms of disease. One should use careful judgment before ascribing these to the toxin-antitoxin or to the toxoid. Last week I received a letter from a state health officer telling me of twelve cases of wrist-drop following toxin-antitoxin. I asked him about the possibility of lead poisoning, and he found 0.15 part per million of lead in the school drinking water. I might add that in many thousands of cases we have had as good results with the diphtheria toxoid as with the toxin-antitoxin; but the local reactions in the older children are somewhat more severe. In preschool children they are rather less. There is no reason, therefore, why any one who hesitates to use toxin-antitoxin should not use toxoid. I have not been able to convince myself that such a change is wise at the present time.

WILLIAM H. PARK, M.D., New York.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

BOILED MILK OR PASTEURIZED MILK

To the Editor:—What objection is there to boiling milk in a double boiler for one-half hour or longer for a child past 1 year of age? Will taking cod liver oil, orange juice, tomato juice and vegetables overcome the objection? Is the milk we get from our so-called big dairies safe if boiled from one to three minutes? All dairies claim that they sterilize the containers and pasteurize the milk.

H. E. GOLDBERGER, M.D., Chicago.

ANSWER.—There is little objection to heating milk in a double boiler for an hour or longer, although such a procedure is unnecessary. Fresh vitamins should be included in the diet, however. Milk produced under our present standards of cleanliness and inspection may be considered safe for infants after it has been boiled three minutes.

COUNTING BLOOD PLATELETS

To the Editor:—In the *Archives of Pathology and Laboratory Medicine* (**2**: 514 [March] 1927) under Abstracts from Current Literature, there is an abstract of an article on counting blood platelets, by F. B. Hofmann (*Deutsche med. Wchnschr.* **52**: 861 [May 21] 1926), in which appears the sentence, "In healthy persons the counts average 760,000 in men and 682,000 in women." Are not these figures considerably higher than those generally accepted heretofore; namely, between 224,000 and 330,000 per cubic millimeter of blood? Will you please give me your opinion on this question? Please omit my name.

M.D., Illinois.

ANSWER.—H. M. Feinblatt and A. H. Eggerth in "Clinical Laboratory Medicine" (William Wood & Co., 1925, page 15) quote Wright and Kinnicut, that the normal values for blood platelets range between 224,000 and 330,000 per cubic millimeter. The reason for the values given by Hofmann can be found in an abstract of his article published in THE JOURNAL, July 24, 1926, p. 287. This abstract read as follows: "Hofmann directed Flössner and Danz to investigate the best fluid for preservation of blood platelets. They found this in the Tyrode solution, with addition of about one fifth of its volume of a 0.1 per cent solution of mercuric chloride. The counts made in healthy subjects averaged 760,000 platelets in men and 682,000 in women. The usual methods yield less than one half of this number. This is due to the fact that the small—and probably young—platelets break up with the other methods. Hemoconia seem to be products of their disintegration."

WASSERMANN TEST AND HECHT-GRADWOHL MODIFICATION

To the Editor:—Is it true that, when a Wassermann test of the blood is negative and of the same blood a Hecht-Gradwohl test is positive, there is thereby established a serologic diagnosis of syphilis? Please omit signature.

M.D., Arkansas.

ANSWER.—There has been considerable discussion in the literature as to the relative sensitivity of the ordinary Wassermann technic and that of the Hecht-Gradwohl procedure. It is probably true that the latter is somewhat more sensitive than the original Wassermann technic, but this slight difference would hardly warrant a positive statement that a positive serologic diagnosis of syphilis was established, simply on the basis of this difference in sensitiveness. There

are many factors which influence the proper outcome of a Wassermann test, whatever the technic employed may be, so that one would have to know the exact technic followed in the tests in question in order to arrive at a definite conclusion. It is an everyday occurrence to find slight variations in the reports of different workers on the same serum, but these discrepancies are usually limited to degrees of positivity rather than to a negative report on the one hand and a positive report on the other, although this condition does occasionally obtain. There is little question that some procedures may give a frank negative and other technics a one or two plus positive result, but under such conditions it is very difficult for a serologist to make a definite statement unless he is thoroughly familiar with the clinical history of the case. If this question were to be answered directly, it might be said that a serological diagnosis of syphilis is not established by the mere fact that a Hecht-Gradwohl test was positive when a Wassermann test was negative. The degree of positivity of the Hecht-Gradwohl test and the method of procedure in making the Wassermann test would have to be known before a more definite statement would be justified, and even such facts would not be sufficient to establish a positive diagnosis on such a variation. This answer presupposes, of course, that both tests have been performed by competent workers.

COLD EXTREMITIES

To the Editor:—I have a girl patient, aged 18 years, whose hands and feet are always red and usually cold. The condition is apparently due to defective capillary circulation. I should like to know whether this state has a technical name, and if you can tell where I may find a description of it in textbooks I shall appreciate it. I am surprised to find that her blood pressure is 140 systolic and 80 diastolic. Heart examination is negative. I am not hopeful of the condition being remediable, but I should like to read all that is known about it. The condition is in no way associated with her employment.

JAMES W. WALKER, M.D., Chicago.

ANSWER.—In the case described in which the hands are cold and red, two factors are involved, the lowered surface temperature and the dilatation of the surface capillaries and venules. Surface temperature is regulated by the amount of arterial blood reaching the skin through the arterioles. When the hand is cold the fundamental disturbance may be organic closure of the larger arteries with decreased amount of blood reaching the arterioles, or vasoconstriction and diminished surface circulation. In the hot extremity, vasodilatation and increased surface blood are present. The color of the skin is due to variations in the surface capillaries and venules and their contained blood. Pallor is due to constriction of these vessels with a diminished exposure of capillary blood. Cyanosis indicates dilated capillaries and venules, and an increased number of open capillaries with static or retarded flow of capillary blood. The blueness of the blood indicates an abnormal unsaturation of the capillary blood with oxygen due to retardation of the flow. However, the flow may be retarded but not to a degree to produce cyanosis.

In the case in question presenting cold, red extremities, it is assumed that palpable vessels are open and pulsating and that vasoconstriction of the arterioles is responsible for the lowered surface temperatures. The capillaries are dilated and many are open. Either the flow through these is sufficiently rapid to prevent abnormal oxygen unsaturation (cyanosis) of the capillary blood, or the local metabolism is carried on at a diminished rate and less oxygen is taken from the capillary blood. In view of the coldness of the tissues, probably both factors are concerned in the production of the color of the capillary blood in this case. Environmental cold plus diminished surface circulation prevent the tissues from utilizing the oxygen that is available, and the blood retains a red color.

These vasomotor disturbances are frequently observed in young girls. The hands and feet are usually cold, moist and cyanotic; the condition is designated as acrocyanosis, acroasphyxia. There is no term to indicate the cold, red hand or foot. The underlying condition is the same in the two types. The cause of these disturbances is not known. Mueller believes they are constitutional and groups them as evidences of "vasomotor constitution." When the vasoconstrictive disturbances are present in sufficient degree to produce, in addition to the color changes, pallor and cyanosis, pain or trophic disturbances and are intermittent in character, the condition is designated as Raynaud's disease.

The cold, red extremity is frequently attributed erroneously to erythromelalgia. The underlying disturbance in the latter condition is intermittent vasodilatation, with increased heat and redness. The treatment of the vasoconstrictive disturbances is usually unnecessary since the condition is not troublesome and has no particular significance. Measures to increase the general vascular tone, as hot and cold contrast baths for hands and feet, increasing the body weight and outdoor life, are usually advised.

Further reference may be found in Buerger's "The Circulatory Disturbances of the Extremities."

PERTUSSIS VACCINE AS A PROPHYLACTIC

To the Editor:—Is pertussis vaccine of any value as a prophylactic? Kindly omit name. M.D., Chicago.

ANSWER.—Pertussis vaccine seems to have little if any prophylactic value. This might possibly be due to a number of factors:

1. The time interval between exposure and onset is usually so brief that the prodromal stage is already well established when the vaccine is administered.

2. If immunity is so acquired in an unexposed child, the period of protection is very brief.

3. The strength, polyvalence and freshness of the vaccine apparently are concerned in the therapeutic efficacy, and probably also in its prophylactic value.

4. Apparent prophylaxis may be due to: (*a*) insufficient or questionable exposure (the disease is very much less contagious during the paroxysmal stage); (*b*) nonsusceptibility of the exposed child.

DOSAGE OF EMETINE FOR INFANTS

To the Editor:—Please advise me as to the use of emetine hydrochloride in infants. Is there danger in giving this drug by injection to the amount of 0.02 or 0.03 Gm. for four or five consecutive days to a one year old child? What is the amount that can be used with safety for this age? Please omit name. M.D.

ANSWER.—The dose of emetine hydrochloride for a 1 year old child is generally placed at 0.005 Gm., though this dose has been given twice daily. Such a dose may be administered intramuscularly for four or five consecutive days, but should be discontinued immediately if diarrhea or other symptoms of intolerance occur.

CORNEAL AND PHARYNGEAL REFLEX DURING ANESTHESIA

To the Editor:—Which is the later to disappear during anesthesia: the corneal or the pharyngeal reflex? I have observed that the pharyngeal reflex goes later than the corneal, because during the performance of tonsillectomy and adenoidectomy the child will usually gag and retch even though the corneal reflex has disappeared. However, some of my medical friends differ with me and so I shall be glad if you will clear up the fog of the situation for us. LOUIS S. SMITH, M.D., Brooklyn.

ANSWER.—A survey of the literature relative to the rate of disappearance of the pharyngeal and corneal reflexes under anesthetics has failed to reveal any data on the subject with the exception of one statement by Cushny that the corneal reflex was one of the last to disappear. At the request of THE JOURNAL, a number of experiments on dogs were performed by the class on physiology of the nervous system at the University of Chicago, three types of anesthetic agents being given in doses designed gradually to bring on a more or less profound state of anesthesia. The drugs experimented with were paraldehyde, barbital-sodium and ether. The paraldehyde was given to the extent of 1.5 cc. per kilogram of body weight by mouth; barbital was administered by mouth also, the dosage being 225 mg. per kilogram of body weight. Ether was administered by inhalation up to the point of disappearance of all reflexes.

The rate of disappearance of the two reflexes in question was noted during introduction to profound anesthesia, and also the relative rate of reappearance during the period of recovery. The animal was then again anesthetized more deeply and the rate of disappearance of the pharyngeal and corneal reflexes again noted. Whereas but one experiment was made with ether and one with barbital sodium, three experiments were done on dogs under paraldehyde anesthesia. The general results of the experiments were as follows:

1. If by pharyngeal reflex is meant contraction of the superior and middle constrictors of the pharynx and elevation of the soft palate on mechanical stimulation of the faucial, laryngeal and posterior pharyngeal region, all experiments indicate that such contractions disappear before the

reflex closure of the eyelids on either stimulation of the cornea directly or conjunctival mucous membrane, or on touching the eyelids themselves. It is, of course, difficult in animals to make tests on the pharyngeal reflex when the animals are not under the influence of any anesthetic whatever. As the animals are put to sleep and the jaws relax sufficiently to allow one to open the mouth widely in order to make the test, reflex movements of the pharyngeal region occur almost only in the conjunctiva with or preceding the act of deglutition. Occasionally mechanical irritation of the posterior pharyngeal wall will cause elevation of the palate without simultaneous or subsequent constriction of the superior middle constrictors of the pharynx. At a time when the conjunctival reflex is quite pronounced, even marked irritation of the tonsillar, palatal region, pharyngeal region or laryngeal region will not give any movements of the pharynx or will give only an occasional act of deglutition. In fact, one can introduce an applicator directly into the larynx at this time and only elicit occasionally a slight cough and temporary inhibition of respiration.

So far as was noted in these experiments, the corneal and conjunctival reflexes are still present at a time when even more violent manipulation of the pharyngeal region are used and ineffective. Increasing the anesthesia a trifle more leads likewise to abolition of the corneal and conjunctival reflex.

2. The closure of the palpebral fissure by touching the palpebra with the tip of the finger resists considerably longer than the closure of the eyes on touching the cornea with the applicator; or, if both are present in a given state of anesthesia, the corneal reflex disappears much earlier on continuing the application of the stimulation than the winking reflex elicited by touching the edges of the partially closed eyelids.

3. In these experiments, simple mechanical stimulation of the mucous membrane was employed. Presumably in experiments on human beings in which an actual cutting operation was done in the pharyngeal or faucial region, as during a tonsillectomy, the knife actually cuts nerve fibers (of pain) and this form of stimulation is, of course, much more powerful and is more likely to elicit reflex effects in the faucial region than the slight touching of the cornea or conjunctiva performed at the same moment.

CONTINUOUS BATH IN TREATMENT OF BURNS

To the Editor:—Is the continuous bath often used now in treatment of extensive burns of the body surface, both of the second and the third degree? If so, with what measure of success as compared with ordinary topical applications? Please describe in detail technic of giving continuous bath for extensive burns. Please omit name.

M.D., Iowa.

ANSWER.—The continuous bath treatment of burns is not frequently used because of the special apparatus necessary, under the constant supervision of a trained attendant. It is of decided value for the first few days in extensive second and third degree burns of the body, especially when the patient is in coma, with a small, rapid pulse, dyspnea and anuria. Continuous baths relieve pain, are sedative, and improve the circulation of the skin. They prevent to some extent the absorption of toxic products. It is difficult to give the continuous bath without a special large tub provided with temperature regulators, large outflow pipes, and rims supplied with hooks for the attachment of supporting sheets and pillows.

The following rules have been found necessary for the giving of the continuous bath, because of the fatal accidents that have occurred:

1. First fill the tub with hot water to warm it. The hottest water should not be more than about 120 F.
2. Fill the tub and regulate the temperature to 98 F. before placing the patient in it.
3. Test the temperature every thirty minutes, at least. Keep it at 98 F.
4. After the temperature is adjusted, shut off the intake. Do not permit a continuous flow.
5. Keep the ears dry.
6. A trained attendant must not leave the room while the patient is in the bath.
7. Avoid exposure on removal from the bath.

Some other recognized method for the treatment of burns, such as the use of boric acid or a 10 per cent sodium bicarbonate solution dressing, but avoiding the use of irritating or toxic antiseptics, will ordinarily be preferred. In addition, fluids, stimulants and alkalis must be given as necessary.

INCREASED METABOLIC RATE

To the Editor:—Please give me information regarding the clinical conditions producing or accompanied by increased metabolic rate, aside from thyroid disturbance. I am particularly interested in knowing whether any of the neuroses may cause an increase. Please do not publish name.

M.D., Illinois.

ANSWER.—Except for certain of the leukemias, fevers and diabetes in certain stages, it is questionable whether increased metabolic rate occurs unless there is some involvement of the thyroid gland. There is considerable work being done on other conditions, such as heart disease and essential hypertension, in which an increased metabolic rate is found. The increased metabolism in heart disease appears only during decompensation. As yet the exact significance of the increased rate with hypertension is not definitely established; but a more thorough investigation of such cases would make it very probable that they too belong to the thyroid group. It is exceedingly doubtful whether any of the neuroses by themselves are associated with increased metabolism.

STABILITY OF KAHN'S ANTIGEN

To the Editor:—In an article abstracted in THE JOURNAL, J. E. Houghton states the antigen used in Kahn's test for syphilis is stable. On the other hand, an American house at Rio says the antigen will keep only a few months. What is the truth?

M. V. FONSECA, JR., M.D., Alegrete, Brazil.

ANSWER.—Four or five years ago it was believed that antigen for the Kahn test was not stable. Now, however, it is known that this antigen is a stable product (Kendrick and Jenks: Stability of Standard Kahn Antigen, *J. Lab. & Clin. Med.* **11**:369 [Jan.] 1926). The antigen is known to keep for several years and very likely indefinitely. It should be stored in the dark at room temperature.

DRYNESS OF THE MOUTH

To the Editor:—A man, aged 58, who has been under my care for some time, has a blood pressure never less than 180 systolic and 120 diastolic; at times it is even as high as 225 systolic. His heart is somewhat dilated to the left and downward; there is a soft mitral murmur, with distinct evidence of myocardial degeneration. There is shortness of breath. He is troubled with frequent urination and nocturia; the urine has never showed any casts or sugar, and only a trace of albumin. The prostate gland is enlarged and there is a suspicion of hard nodules. The patient complains of "crampy" pain in the lower abdomen. He has always been of a very neurotic disposition, self-conscious and self-centered, and has not worked for the last twenty years. One of the most troublesome symptoms is a terrible dryness of the tongue, lips and buccal mucosa, unaffected by all ordinary methods of relief. I am rather afraid to use any of the pilocarpus preparations on account of the patient's heart. Would you kindly direct me to some literature on this subject, and would you also mention some of the drugs that would be useful in this case? Kindly omit my name.

M.D., Connecticut.

ANSWER.—The question as our correspondent presents it is not so much one of dryness of the mouth as a determination of the underlying condition. A patient with left ventricular hypertrophy, high blood pressure, shortness of breath, frequent urinations and nocturia suggests chronic interstitial nephritis, and it would be safe to make a diagnosis on that information alone. The patient can even go into uremia and show little, or even nothing in some cases, in the way of albumin or casts.

A dry mouth is a rather frequent condition in chronic interstitial nephritis, especially as the patient approaches uremia. A phenolsulphonphthalein test will give information reliable enough for clinical purposes; or the test devised by Dr. Olmsted, which requires only a hygrometer and a measuring glass, will give information as to chronic interstitial nephritis.

If the specific gravity is taken of several specimens of urine and is found to be of low value and not to vary more than a few points, it is good evidence that such a condition exists. Another condition also could be responsible. The prostate is enlarged and nodular, and the patient complains of pains in the lower abdomen. Is there enough retention in the bladder to account for the crampy pains? Carcinoma of the prostate would also have to be considered. Obstruction due to any prostatic trouble with consequent kidney changes could account for the dryness of the mouth. In such a condition, however, one would expect to find some evidence of cystitis.

Any febrile condition could be responsible for dryness of the mouth. The neurotic disposition has nothing to do with it. Neurotic people are more apt to get a temporary dry-

ness because of excitement, but not such a persistent dryness. The treatment should be directed to the underlying cause. One or two simple remedies can give the patient a great deal of comfort: glycerin, one part, in five or six of water, with a little lemon juice, will add to his comfort. Better still is old fashioned linseed tea flavored with lemon or orange juice, to which a little glycerin can be added. The linseed tea may be taken in any amount. It is sufficiently mucilaginous to keep the mouth moist much longer than water.

Gastric conditions also should be ruled out; but there seems to be enough in the genito-urinary tract to account for the symptoms.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 12-15. Sec., Dr. S. W. Welch, Montgomery.

CALIFORNIA: San Francisco, June 27-30. Sec., Dr. Charles B. Pinkham, 908 Forum Bldg., Sacramento.

COLORADO: Denver, July 5. Sec., Dr. David A. Strickler, 1011 Republic Bldg., Denver.

CONNECTICUT: State Board of Healing Arts, New Haven, June 4. Prerequisite to examinations. Applications to be filed by May 21. State Board of Healing Arts, Box 1895, Yale Station, New Haven. Regular: Hartford, July 12-13. Sec., Dr. Robert L. Rowley, 79 Elm St., Hartford.

DELAWARE: Wilmington, June 21-23. State Society and Homeopathic. Pres., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

DISTRICT OF COLUMBIA: July 12. Sec., Dr. Edgar P. Copeland, Suite 110, 1801 Eye Street, Washington.

FLORIDA: Tampa, June 13-14. Sec., Dr. Wm. M. Rowlett, Box 603, Tampa.

GEORGIA: Atlanta and Augusta, June 8-10. Sec., Dr. J. W. Palmer, Ailey.

ILLINOIS: Chicago, June 28-30. Supt. of Regis., Mr. V. C. Michels, Springfield.

INDIANA: Indianapolis, June 21-23. Sec., Dr. E. M. Shanklin, 421 State House, Indianapolis.

IOWA: Iowa City, June 7-9. Director of Exams. and Licensure, Mr. H. W. Grefe, Des Moines.

KANSAS: Topeka, June 21. Sec., Dr. A. S. Ross, Sabetha.

KENTUCKY: Louisville, June 21-23. Sec., Dr. A. T. McCormack, 532 W. Main Street, Louisville.

LOUISIANA: New Orleans, June 9-11. Sec., Dr. Roy B. Harrison, 1507 Hibernia Bank Bldg., New Orleans.

MAINE: Bangor, July 5-6. Sec., Dr. Adam P. Leighton, Jr., 192 State Street, Portland.

MASSACHUSETTS: Boston, July 12-14. Sec., Dr. Frank M. Vaughan, 144 State House, Boston.

MARYLAND: Regular, Baltimore, June 21-24. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore. Homeo. Baltimore, June 14. Sec., Dr. J. S. Garrison, 517 Old Orchard Rd., Ten Hills, Balitmore.

MICHIGAN: Ann Arbor, June 14-16 Detroit, June 20-22. Sec., Dr. Guy L. Connor, 707 Stroh Bldg., Detroit.

MINNESOTA: Minneapolis, June 21-23. Sec., Dr. A. E. Comstock, 636 Lowry Building, St. Paul.

MISSISSIPPI: Jackson, June 21-22. Sec., Dr. Felix J. Underwood, Jackson.

MISSOURI: St. Louis, July 13-15. Sec., Dr. James Stewart, Jefferson City.

NEBRASKA: Omaha, June 7-9. Sec., Mr. Lincoln Frost, State House, Lincoln.

NEW JERSEY: Trenton, June 14-15. Sec., Dr. Charles B. Kelley, 28 West State Street, Trenton.

NEW YORK: Albany, Buffalo, New York and Syracuse, June 27-30. Chief, Professional Examinations, Mr. Herbert J. Hamilton, State Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 21. Sec., Dr. John W. MacConnell, Davidson.

NORTH DAKOTA: Grand Forks, July 5-8. Sec., Dr. G. M. Williamson, Grand Forks.

OHIO: Columbus, June 7-11. Sec., Dr. H. M. Platter, Hartman Hotel Bldg., Columbus.

OREGON: Portland, July 5-7. Sec., Dr. M. K. Hall, 816 Pittock Block, Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 5-9. Dir. Professional Education Bureau, Mr. C. D. Koch, Harrisburg.

RHODE ISLAND: Providence, July 7. Sec., Dr. B. U. Richards, Providence.

SOUTH CAROLINA: Columbia, June 28. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

SOUTH DAKOTA: Huron, July 19. Dir. Medical Licensure, Dr. H. R. Kenaston, Bonesteel.

TENNESSEE: Memphis, Nashville and Knoxville, June 17-18. Sec., Dr. A. B. DeLoach, 733, Medical Arts Bldg., Memphis.

TEXAS: Austin, June 21-23. Sec., Dr. T. J. Crowe, 918 Mercantile Bank Bldg., Dallas.

VERMONT: Burlington, June 22-24. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 15-18. Sec., Dr. J. W. Preston, Box 444, Richmond.

WASHINGTON: Seattle, July 11. Basic Science Examination, Seattle, July 7-8. Ass't. Director, Mr. George L. Berger, Olympia.

WISCONSIN: Milwaukee, June 28-30. Sec., Dr. Robert E. Flynn, La Crosse. Basic Science Board: Milwaukee, June 27. Sec., Dr. M. F. Guyer, Madison.

WYOMING: Cheyenne, June 1-2. Sec., Dr. G. M. Anderson, Cheyenne.

SCHOOLS OFFERING SUMMER COURSES IN 1927

Prepared by the Council on Medical Education and Hospitals

ALABAMA

UNIVERSITY OF ALABAMA SCHOOL OF MEDICINE, University.—Courses in gross anatomy, embryology, physiologic chemistry, surgery, materia medica and pharmacy will be offered to medical students, conditioned students from other medical schools and others qualified to take them. Classes will be limited to forty students in each subject. The summer quarter will be divided into two terms. The first term begins, June 1, and ends, July 12. The second term begins, July 13, and ends, August 23. Dr. Clyde Brooks, dean.

CALIFORNIA

STANFORD UNIVERSITY SCHOOL OF MEDICINE, 2398 Sacramento Avenue, San Francisco.—Courses will be offered to qualified graduates in medicine and undergraduates of this and other schools in clinical and laboratory work in the following departments as special workers: pharmacology, pathology, general medicine, tropical medicine, diabetes, electrocardiography and basal metabolism, chest diseases, pediatrics, neuropsychiatry, skin and syphilis, metabolism laboratory, radiology, physical therapy technic, general surgery, orthopedic surgery, genito-urinary surgery, ophthalmology, otorhinolaryngology, surgical pathology, obstetrics and gynecology, gynecologic laboratory, obstetrics, female urology. The summer term begins, June 15, and ends, September 1. Dr. William Ophuls, dean.

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL, Parnassus and Third avenues, San Francisco.—Courses for qualified graduates in medicine, given in general medicine, pediatrics, gastro-intestinal diseases, dermatology, syphilology, radium therapy, general surgery, orthopedic surgery, otorhinolaryngology, ophthalmology, genito-urinary diseases, surgical pathology, roentgen ray, obstetrics and gynecology, circulatory diseases, laboratory diagnosis, neurology and neuropsychiatry. The summer term begins, June 6, and ends, July 2. Dr. Eugene S. Kilgore, director, graduate courses.

COLORADO

COLORADO SCHOOL OF TUBERCULOSIS, Colorado Springs.—A summer course in tuberculosis will be offered to graduates in medicine from July 1 to August 1. The schedule provides for lectures, clinics and individual instruction. From August 1 to August 10, opportunity will be offered for practical work in the various sanatoriums. The preference of the students for special subjects, such as laboratory methods, roentgen ray, artificial pneumothorax, and physical diagnosis, will be consulted as far as possible. Dr. G. Burton Gilbert, secretary.

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, 4200 East Ninth Avenue, Denver.—Courses for medical students will be offered in gross anatomy, histology, neuro-anatomy, embryology and biochemistry. A course in clinical pathology is also offered primarily for nurses and others who wish to qualify as laboratory technicians. The first term begins, June 20, and ends, July 21. The second term begins, July 25, and ends, August 27. Dr. Maurice H. Rees, dean.

CONNECTICUT

NEW HAVEN SCHOOL OF PHYSIOTHERAPY, 303 Whitney Avenue, New Haven.—Courses offered to well qualified graduates in medicine can be given at any time, but during the summer, from May to October. The plan is to group them on the first of each month. Individual instruction may be had and also practical work on apparatus. Dr. Harry Eaton Stewart, director.

DISTRICT OF COLUMBIA

HOWARD UNIVERSITY SCHOOL OF MEDICINE, Corner of Fifth and W streets, N.W., Washington.—Courses open to graduates of recognized medical colleges. Instruction given in general surgery, gynecology, genito-urinary surgery, internal medicine, otolaryngology, ophthalmology, roentgenology, public health, laboratory methods and physical diagnosis. Dr. Edward A. Balloch, dean.

GEORGIA

EMORY UNIVERSITY SCHOOL OF MEDICINE, 50 Armstrong Street, Atlanta.—A two weeks' course in clinical medicine will be offered to graduates and undergraduates in medicine. The course is primarily for practitioners who wish a brief period of clinical contact. Should the demand justify it, it is probable that a course in clinical microscopy will be offered. Dr. Russell H. Oppenheimer, dean.

ILLINOIS

RUSH MEDICAL COLLEGE, Wood and Harrison streets, Chicago.—This school has the four quarter system, and therefore the usual summer course is offered to undergraduates. Dr. Ernest E. Irons, dean.

Courses in hygiene, public health and related subjects will be offered to qualified students and to graduates in medicine. Summer quarter is divided into two terms. The first term begins, June 20, and ends, July 27. The second term begins, July 28, and ends, September 2. Application should be made to the University Examiner (University of Chicago) at least two weeks in advance of the opening of the quarter.

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, Honore and Congress streets, Chicago.—Graduate courses for physicians will be offered in the departments of anatomy, physiologic chemistry, dermatology and syphilography, internal medicine, laryngology, rhinology and otology, neurology and psychiatry, ophthalmology, obstetrics and gynecology, pathology and clinical pathology, pharmacology and experimental therapeutics, pediatrics, roentgenology and surgery. The course begins, June 1, and ends, June 30. In some fields the courses will be given six days a week, others only three, four or five days a week. Registration will be limited to a small number. The full-time registration fee will be $100; for half-time registration (or less), $50. Mr. William H. Browne, secretary.

INDIANA

INDIANA UNIVERSITY SCHOOL OF MEDICINE, Indianapolis.—Beginning June 10 and lasting for six weeks there will be offered to the physicians of Indiana short courses in biochemistry, pharmacology, physical diagnosis, ward visits, general pathology, physical therapy, modern drug therapy and biotherapy, disease production and resistance, and a nutrition course. Clinics are held in the following subjects: dermatology, genito-urinary, gynecology, ophthalmology, rhinology, otology, laryngology and surgery. Ample clinical material in both hospital and dispensary patients is available for these clinics. Courses limited to a certain number of students. For further information address the registrar.

IOWA

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE, Iowa City.—Courses offered to undergraduate students in anatomy, histology, embryology, chemistry (research) and head specialties. The summer course is for six weeks and begins after the close of the regular academic year in June. Dr. L. W. Dean, dean.

KANSAS

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, Lawrence-Kansas City.—Courses are offered to qualified graduates in medicine and undergraduate students in pathology, anatomy, physiology, biochemistry and bacteriology. The only course given at Kansas City is that in pathology. The summer session will continue ten weeks and is divided into two terms of six weeks and four weeks, respectively; the first term begins, June 8, and ends, July 16; the second term begins, July 18, and ends, August 12. Mr. George O. Foster, registrar, room 102, Administration Building, Lawrence.

MARYLAND

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE, Lombard and Greene streets, Baltimore.—A review course for physicians (not a postgraduate course) will be offered during the month of June. This course consists of daily instruction in medicine, surgery, specialties (obstetrics, gynecology, ophthalmology, laryngology, etc.). Dr. J. M. H. Rowland, dean.

MICHIGAN

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL, Ann Arbor.—Courses open to qualified graduates in medicine, undergraduates of this and other schools and all persons qualified to pursue them to advantage. Instruction given in anatomy, bacteriology, dermatology and syphilology, internal medicine, neurology, obstetrics and gynecology, ophthalmology, otolaryngology, pathology, pediatrics, pharmacology and materia medica, physiologic chemistry, physiology, roentgenology and surgery. The course begins, June 27, and ends, August 5. Some of the laboratory courses that may be elected to advantage by students from other schools and colleges of the university will close, August 19. Dr. Hugh Cabot, dean.

MINNESOTA

UNIVERSITY OF MINNESOTA MEDICAL SCHOOL, Minneapolis.—This school has the four quarter system, and therefore the usual summer course is offered to both graduate and undergraduate students.

MISSOURI

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE, 1402 South Grand Avenue, St. Louis.—Work adjusted to needs of three classes of students:

1. Undergraduate medical students. Courses in the laboratory branches are provided, so that students who desire may secure advanced standing or remove deficiencies in work previously taken. Open to both practitioners and undergraduates.

2. Preparatory and collegiate medical students. Courses in biology, inorganic and organic chemistry, physics and language are offered for the benefit of students who desire to attend a medical school but who still lack sufficient college credit to qualify for admission.

3. Teachers, etc. High school teachers and others who do not care for credit in medicine but who possess the required preliminary training will be admitted to the laboratory and other courses.

A four weeks' course in roentgenology will be offered to a limited number of students; fee, $100.

No course will be given unless a sufficient number of applicants have registered for it by the time the session opens. Two courses in college or laboratory subjects will constitute full work. No formal clinical courses are announced; however, special arrangements may be made for those who desire instruction in some of the clinical branches.

For further information apply to the director of the summer school.

NEBRASKA

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE, Forty-Second and Dewey Avenue, Omaha.—A full clinical schedule will be offered, to the senior students of the University of Nebraska, which will extend throughout the entire summer and enable them to graduate in February instead of June. Dr. J. Jay Keegan, dean.

NEW JERSEY

PHYSIATRIC INSTITUTE, Morristown.—The course, for graduate physicians, gives a practical working knowledge of the management of diabetes, obesity, anemia, cardiorenal-vascular diseases, etc., according to the methods employed in this institute. The work includes lectures and practical experience in the laboratories, diet kitchens and wards of the institute. The tuition is $150. The course begins, June 1, and ends, July 1. The same work can be taken informally in other months without lectures, at the same fee. Dr. Frederick M. Allen, director.

NEW YORK

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS, 437 West Fifty-Ninth Street, New York City.—Courses in anatomy, bacteriology, cancer research, neurology and practice of medicine will be offered to medical students as well as to physicians who may pursue them. The session begins, July 11, and ends, August 19.

A six weeks' clinical course with lectures on physical therapeutics will be given to well qualified graduates in medicine from June 6 to July 16. A five weeks' course on internal medicine will be given to well qualified graduates in medicine from June 13 to July 15. Courses in public health and preventive medicine will be given if a sufficient number apply. This course is open to physicians, sanitarians, nurses,

teachers, social workers and other health workers. Courses begin, July 11. Dr. William Darrach, dean.

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL, 341-353 West Fiftieth Street, New York City.—Courses available during the summer term are the same as those offered during the year, open for general practitioners. Courses may begin at any time. Dr. J. A. Kearney, executive officer.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, Second Avenue, Twentieth and Twenty-First streets, New York City.—Courses available during the summer term are the same as those offered during the year, open for general practitioners. Dr. William D. Cutter, dean.

TRUDEAU SCHOOL OF TUBERCULOSIS, Saranac Lake.—A course in the intensive study of tuberculosis is being offered to graduates in medicine from May 16 to June 25 (a six weeks' course). Dr. E. R. Baldwin, director.

UNIVERSITY OF BUFFALO SCHOOL OF MEDICINE, 24 High Street, Buffalo.—Courses in anatomy and biochemistry will be offered to medical students and graduates. Applications for admission to the summer session should, if possible, be made on or before June 1. Dr. C. Sumner Jones, dean.

OHIO

OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, 710 North Park Street, Columbus.—A few of the students of the Ohio State University will be permitted to take dispensary and practical obstetrics. A course in bacteriology will also be offered to undergraduates. The summer quarter extends from June 20 to August 31. Dr. E. R. McCampbell, dean.

UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE, Eden and Bethesda Avenues, Cincinnati.—Courses in biochemistry, physiology and bacteriology will be offered beginning June 20 and ending August 13. Registration, however, should be made prior to June 15. Dr. A. C. Bachmeyer, dean.

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE, 2109-2115 Adelbert Road, Cleveland.—A summer course in physiology will be offered to medical students who find it necessary to repeat the course. Courses will not be given unless a certain number apply. The summer session will begin on or about June 13. Dr. Carl A. Hamann, dean.

OREGON

UNIVERSITY OF OREGON MEDICAL SCHOOL, Marquam Hill, Portland.—A number of courses in clinical subjects in the outpatient department and in anatomy will be offered to students of the University of Oregon. No courses available for students from other schools. Dr. Richard B. Dillehunt, dean.

PENNSYLVANIA

UNIVERSITY OF PENNSYLVANIA GRADUATE SCHOOL OF MEDICINE, Philadelphia.—Courses for graduates, during the summer months, in various hospitals and institutions offered in conjunction with the graduate school are as follows: parasitology and tropical medicine, July and August each year; gastro-enterology, May 23 to July 2; allergy; intubation; clinical dermatology; neuro-anatomy, neurophysiology and neuropathology; neuro-otology; clinical psychiatry; operative surgery and surgical anatomy; anesthesia; gynecology for the general practitioner, June 13 to August 6; cystoscopy; slit lamp microscopy; laryngoscopy, bronchoscopy and esophagoscopy; otologic operations; otolaryngologic operations; correction of defects of speech; clinical biochemistry. Dr. George H. Meeker, dean.

TEXAS

BAYLOR UNIVERSITY COLLEGE OF MEDICINE, 720 College Avenue, Dallas.—If the demand justifies, complete courses in bacteriology, biochemistry, histology, embryology, neuro-anatomy and pharmacology will be offered from June 13 to August 1. These courses will be the equivalent of those given during the regular session.

In addition, a series of clinics for practitioners will be given from May 30 to June 12. Dr. W. H. Moursund, dean.

UNIVERSITY OF TEXAS SCHOOL OF MEDICINE, Avenue B, between Ninth and Tenth streets, Galveston.—A short course of lectures and clinics for practitioners will be held from May 23 to June 4, inclusive. Dr. Henry Hartman, acting dean.

VIRGINIA

UNIVERSITY OF VIRGINIA DEPARTMENT OF MEDICINE, Charlottesville.—Courses in the medical sciences are being offered during the summer for medical students who are deficient in these subjects and desire to make a review: group A, histology and embryology; group B, anatomy, topographic anatomy and anatomy of the human nervous system; group C, biochemistry; group D, pharmacology. No courses will be given in any group if less than six students apply. Dr. Harvey Ernest Jordan, professor of histology and embryology.

WEST VIRGINIA

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE, Morgantown.—Courses offered to undergraduate students in (gross) anatomy, including neurology, histology, medical bacteriology, biochemistry and embryology. The summer session is divided into two terms of six weeks each. The first term begins, June 10, and ends, July 21. The second term begins July 22, and ends, August 31. Dr. John N. Simpson, dean.

WISCONSIN

UNIVERSITY OF WISCONSIN MEDICAL SCHOOL, Madison.—Courses offered to undergraduate students in anatomy, bacteriology, hygiene, medicine, pharmacology, physiologic chemistry, physiology and surgery. Summer session begins, June 27, and ends, August 5. Dr. Charles R. Bardeen, dean.

Illinois January Examination

Mr. V. C. Michels, superintendent of registration of the Illinois Department of Registration and Education, reports the written and practical examination held at Chicago, Jan. 11-13, 1927. The examination covered 10 subjects and included 100 questions. An average of 75 per cent was required to pass. Of the 62 candidates examined, 52 passed and 10 failed. Seventeen candidates were licensed by reciprocity, and one by endorsement of his credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
George Washington University Medical School		(1924)	84
Emory University School of Medicine		(1925)	87
Chicago Medical School (1925) 76, (1926) 82		(1927	84
Loyola University School of Medicine		(1916)	76
(1926) 80, 81, 82, 82, 90			
Northwestern University Medical School		(1925)	76
(1926) 78, 79, 80, 83, 84, 85 (1927) 86			
Rush Medical College	(1926) 79, 79, 80, 81, 82, 82,		
83, 83, 83, 84, 84, 85, 87, 87			
University of Illinois College of Medicine		(1926)	81, 83
(1927) 85, 87, 88			
St. Louis University School of Medicine	(1921) 83 (1925		80
Starling Medical College, Columbus		(1903)	79
University of Oklahoma School of Medicine		(1925)	77
Meharry Medical College	(1892) 78	(1924)	77
University of Virginia Department of Medicine		(1922)	82
University of Toronto Faculty of Medicine	(1921) 87	(1924)	75
University of Western Ontario Medical School		(1924)	78
University of Leipzig, Germany		(1914)	77
University of Munich, Germany		(1924)	81
National University of Athens, Greece		(1908)*	76
University of Edinburgh, Scotland		(1914)	79

College	FAILED	Year Grad.	Per Cent
Chicago College of Medicine and Surgery		(1916)	70
Chicago Medical School		(1926)	72
Northwestern University Medical School		(1913)	67
National University of Arts and Sciences, Med. Dept.		(1916)	64
Meharry Medical College	(1914)†	(1919)	35
University of Greifswald, Germany		(1921)	67
University of Leipzig, Germany		(1922)	73
National University of Athens, Greece		(1922)*	72
University of Naples, Italy		(1920)*	71

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
General Medical College, Chicago		(1924)	Wisconsin
University of Illinois College of Medicine		(1919)	Minnesota
Kansas Medical College, Topeka		(1897)	Texas
Tulane University of Louisiana School of Med		(1924)	Louisiana
Tufts College Medical School		(1925)	Maine
University of Minnesota Medical School		(1922)	California
University of Nebraska College of Medicine		(1925, 2)	Nebraska
University of Buffalo Department of Medicine		(1925)	Maryland
Cornell University Medical College		(1920)	Iowa
University of Oklahoma School of Medicine		(1924)	Kansas
Jefferson Med. College of Philadelphia (1923) Penna).		(1924)	W. Virginia
University of Pennsylvania School. of Medicine		(1897)	Penna.

University of Pittsburgh School of Medicine	(1922)	Penna.
National University of Athens, Greece	(1910)*	Penna.
University of Petrograd, Russia	(1913)	California

ENDORSEMENT OF CREDENTIALS

College	Year Grad.	Endorsement with
Harvard University	(1922)	N.B.M.Ex.

* Verification of graduation in process.
† No grade given.

Book Notices

MASTER MINDS IN MEDICINE. An Analysis of Human Genius as the Instrument in the Evolution of Great Constructive Ideas in the History of Medicine, together with a System of Historic Methodology. By John C. Hemmeter, M.D. With an Introduction by Karl Sudhoff, M.D. Cloth. Price, $10. Pp. 771. New York: Medical Life Press, 1927.

This massive volume, dedicated to Charles and William Mayo, consists of thirty-one essays on varied themes, related, in some way, to the centric idea conveyed in the title. It represents a lifetime of serious study and research in the history of medicine. The initial chapters stress a new line of thought, namely, the lack of training in "methodology," which has rendered so much of recent historical writing scrappy, irrelevant and irresponsible. The inspiration of these chapters is to be sought in such books as Ostwald's "Great Men" and the brilliant output of the Leipzig school, particularly Sudhoff's view that, to date, medical history has been "a casual science, without any well planned elaboration or method." In a highly philosophical examination of this matter, Hemmeter differentiates clearly at the start between history (the evolutionary process) and historiography (the mere record), the lines of approach (method) being narrative (frequently fictional), pragmatic or factual, and genetic or developmental (interpretative). The chapters that follow deal with sources of medical history and the virtual lawlessness of secular historic processes, dependent, as they are, on human caprice and "the unstable heart of man," by contrast with the dynamic effect of ideas on the evolution of medicine, and the rôle of great physicians in these developments. Some attention to these basic principles, the very thorough-bass of the subject, is to be recommended in the general teaching of medical history, which will be in motion before long in our universities and medical schools. The whole matter is summed up in Goethe's dictum, "The history of a science is the science itself." In other words, at the ideal mathematical limit, the historic process and its record should tally point for point. Thus, if we could really grasp the ideas that activated the minds of Galen or Sydenham or Broussais or even of Hahnemann at the bedside, we should not only be able to visualize their line of procedure in practice, but we should begin to understand why they were accounted "great" physicians in their day, getting results by what might seem, at first sight, a faulty method. Or, if we consider curiously a bottle of medicine, a surgical instrument or a factual statement in Osler or Keen, we perceive at once a long vista of unexplored territory, brought suddenly to our notice by the question: Just how and why did these remedies or principles come to be established or accepted today? This genetic mode of inquiry into origins, of which we have excellent examples in Huxley's lecture on "A Piece of Chalk," or Osler's Dover's powder study or Meyer Steineg's "Day in the Life of Galen," is the essence of historical investigation, the sign that the subject is alive, healthy and subject to growing pains. It was Osler's way of teaching ("Blaud's pills." "Who was Blaud?") and is open and available to any student.

After some timely consideration of the future of present-day medicine, Hemmeter analyzes the work of Billroth, the Italian precursors of Harvey, Virchow, Haller, the U. S. Army Yellow Fever Commission, H. P. Carter, C. A. Herter, Servetus, Lavoisier, Pasteur, Leonardo, J. J. Woodward, Beaumont, Goethe and Darwin, with reference to the germinal effect of ideas on the advancement of medicine. The arrangement of these chapters (as above) is somewhat haphazard as chronology goes, and interspersed among them are a number of histories of diagnostic procedures which would have gained in perspicuity by segregation elsewhere. The chapter on Billroth contains a full length analysis of his pamphlet on the musical temperament (*Wer ist musikalisch?*), which reveals incidentally the accomplished musician in the author himself. The Leonardo papers include an effective refutation of the calumnies in the freudian pamphlet. But the chapter on the U. S. Army Yellow Fever Commission is virtually a eulogy of Carroll and contains very little as to the scientific demonstration of the transmission of yellow fever by *Aedes* and its nontransmissibility by fomites, which experiments were accomplished after Reed's return to Havana, Oct. 1, 1900. Carroll and Lazear, along with Dean, Kissinger, Moran and the rest of the twenty-four Americans and six Cubans, were no doubt the heroes and martyrs of the enterprise in its incipient, tentative stage. The guiding spirit of the scientific proof was Reed, who alone of the commission grasped the significance of the opening skirmishes in Pinar del Rio, "when fomites failed to infect" and the probable rôle of the particular mosquito which Carlos Finlay had shown him. The only persons who attached any importance to the mosquito theory at the time were Reed and Carlos Finlay himself. The book concludes with two chapters on the psychography of investigators and the relation of heredity and eugenics to genius. There are a number of misprints, and the text would have gained in interest by casting bibliographic references into the footnotes. The portraits, of which there are twenty-eight, are handsomely executed.

The thoughtful introduction by Professor Sudhoff stresses a fact of considerable importance to the future of medicine, viz., that mass action, collectivism, crowd psychology, herd instincts and mob rule have always been very dangerous enemies of medicine in the past. We like to think that vaccination, digitalis, cinchona came from the heart of the people: but they were really the gift, not of the crowd, but of capable individuals. If we look closely into these folk discoveries themselves, we find that they are not really discoveries in internal (bedside) medicine at all but, every one of them, contributions to preventive medicine. It is here, in fact, that the people are destined to play an all important rôle, for without intelligent cooperation of the community or the mass of mankind, public health becomes null and void. This introduction of Sudhoff's seems appropriate for a volume which, whatever its defects of arrangement, is characterized throughout by a steady continuity of serious thought.

LEHRBUCH DER GEBURTSHILFE. Von Prof. Dr. Wilhelm Zangemeister, Direktor der Universitäts-Frauenklinik in Königsberg i. Pr. Paper. Price, 40 marks. Pp. 834, with 348 illustrations. Leipsic: S. Hirzel, 1927.

This book, by one of the foremost German teachers, was written for the general practitioner and hence contains little material that is not of practical use. For example, the technic of cesarean section is given briefly and there is only one small illustration of the operation. The author employs the transperitoneal cervical cesarean section almost exclusively. He favors cesarean section for the treatment of placenta praevia but he does not recommend this procedure to the general practitioner. There is a large section on the toxemias of pregnancy, but this is to be expected because the author has been interested in the subject for many years. He advocates emptying the uterus as soon as possible in cases of eclampsia and also in cases of preeclampsia in which there is no improvement under dietetic, medicinal and other forms of treatment. In the chapter on the urinary tract and in the discussion on cesarean section, the author says that the bladder is injured in 6 per cent of the cases of cervical cesarean section. This may hold true for the extraperitoneal type but certainly does not hold good for the transperitoneal cervical operation. In a series of approximately six hundred transperitoneal cervical cesarean sections performed in one hospital in the Middle West, the bladder was injured only twice (0.3 per cent). The last sixty pages of the book are devoted to diseases of the new-born, and this is an especially commendable section. The book is printed on heavy paper because distributed throughout the text are numerous illustrations, a large number of which are colored. The drawings and photographs are unusually beautiful, clear and instructive. Many, however, were borrowed from other books. A number of illustrations might have been omitted because

they depict rather dangerous procedures for the general practitioner. For example, there is a full-page illustration showing the use of the Bossi metal dilator, which instrument, the author admits, is prone to tear the cervix and causes a maternal death rate of 1 per cent from the hemorrhage that follows cervical laceration. Harm may also be done by the metal hook shown for the delivery of the breech; and an illustration of an incorrect method of delivering the decapitated after-coming head might also have been omitted. The four illustrations showing "collision" of twins are unnecessary since such a condition, as the author himself points out, occurs only once in ninety thousand twin deliveries. The book is written in a clear, simple style and there is a personal note throughout. It will undoubtedly take its place with the leading German textbooks on obstetrics.

PHARMACEUTICAL AND MEDICAL CHEMISTRY. By Samuel P. Sadtler, Ph.D., LL.D., Virgil Coblentz, Ph.D., F.C.S., and Jeannot Hostmann, Ph.G. Sixth edition. Revised and rewritten by Freeman P. Stroup, Ph.M., Professor of General Chemistry, Philadelphia College of Pharmacy and Science. Cloth. Price, $7. Pp. 748. Philadelphia: J. B. Lippincott Company, 1927.

This textbook is primarily written for students in colleges of pharmacy and contains the pharmaceutic and organic chemistry, both theoretical and practical, to meet the requirements of the average state board of pharmacy examination. The book is divided into three parts, the chemistry of the nonmetals, of metals, and of organic compounds; included also are an appendix and a comprehensive index. The first part contains an introductory chapter on the fundamental theoretical principles of chemistry and a description of the nonmetallic elements, including their compounds which are recognized by the United States Pharmacopeia X and the National Formulary V. The second part includes the metals, relating their occurrence in nature, isolation and properties, and describing the more important compounds, including those of the Pharmacopeia X and the National Formulary. The third part comprises the organic classification, describing methods of detection, ultimate analysis of the elements and a concise general survey of the subject. Organic compounds of the Pharmacopeia, the National Formulary and New and Nonofficial Remedies (1926) are also discussed. The appendix contains a brief discussion of electrolysis and its applications and the usual information about strengths of acids and alkalis. The printing is good and free from typographic errors. The text is to be recommended in that the author has refrained from describing in detail the therapeutic uses of the compounds in such a book intended primarily for pharmacists; other textbooks generally pass on to the pharmaceutic student a mass of uncritical therapeutic recommendations.

DISEASES OF THE TEETH. Their Diagnosis and Treatment. By John Albert Marshall, D.D.S., Ph.D., Professor of Dental Pathology and Biochemistry, University of California. Cloth. Price, $4.50. Pp. 331, with 114 illustrations. Philadelphia: Lea & Febiger, 1926.

The text is divided into three parts; part one discusses the diseases of the dental tissues, and part two those of the oral mucous membrane. Part three is quite brief and contains outlines and directions for student use in the laboratory. As suggested in the title, the author covers both the diagnosis and the treatment of these diseases. In addition, there is considerable material on both etiology and pathology, and this last statement is especially true of the chapters on caries and pulp canal therapy. On the whole, the discussion of the various diseases is conventional, the only exceptions concerning matters in which the author has been actively interested, as, for example, the relationship of salivary composition to the incidence of caries. Even in such instances, the views of others are carefully presented. Each chapter is followed by an extensive bibliography, which, however, is not directly connected with the subject matter by either footnotes or reference numbers. A brief discussion of the subjects of cysts, thrush, tuberculosis, syphilis and noma is contained in the last chapter of part two. The author's style is not always clear, and some of his statements on this account are difficult to grasp. The illustrations are adequate, although not all of them are well chosen.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

INDEX AND HANDBOOK OF X-RAY THERAPY. By Dr. Robert Lenk, Privat-Dozent of Medical Roentgenology, University of Vienna. With a foreword by Professor Holzknecht. Translated by T. I. Candy, M.B., B.Ch., D.M.R.E., Hon. Radiologist, Royal Gwent Hospital, Newport, Mon. Cloth. Price, $2.25. Pp. 121. New York: Oxford University Press, 1926.

Outline of roentgen-ray technic with emphasis on Holzknecht measurements.

ELEMENTS OF HYGIENE AND PUBLIC HEALTH. An Introduction to Preventive Medicine for Students and Practitioners of Medicine. By Charles Porter, M.D., B.Sc., M.R.C.P., Medical Officer of Health, Metropolitan Borough of St. Marylebone. Second edition. Cloth. Price, $4.50. Pp. 425, with 98 illustrations. New York: Oxford University Press, 1926.

Outline of public health practice with special reference to British conditions.

DIE KLINIK DER BÖSARTIGEN GESCHWÜLSTE. Herausgegeben von Geh. Rat Prof. Dr. P. Zweifel, und Geh. Med.-Rat Prof. Dr. E. Payr, Direktor der chirurgischen Universitätsklinik zu Leipzig. III Band. Brust- und Bauchorgane, Harn- und weiblicher Geschlechtsapparat, Strahlen- und Vakzinebehandlung. Paper. Price, 76 marks. Pp. 650, with 228 illustrations. Leipsic: S. Hirzel, 1927.

Third volume of important German system of knowledge of tumors.

PRINCIPLES OF PHYSICAL CHEMISTRY FOR MEDICAL STUDENTS. By Phyllis M. Tookey Kerridge, M.Sc., A.I.C., Assistant in the Department of Physiology and Biochemistry, University College, London. With introduction by Prof. A. V. Hill, M.A., F.R.S. Cloth. Price, $1.75. Pp. 134, with 22 illustrations. New York: Oxford University Press, 1927.

Beautifully written but highly technical guide to knowledge of the p_H, osmosis, and similar subjects.

NOUVEAU TRAITÉ DE MÉDECINE. Par G. H. Roger, Fernand Widal, et P. J. Teissier. Fascicule IX. Affections du sang et des organes hématopoiétiques. Par Ch. Aubertin, M. Mouquin, A. Clerc, et autres. Boards. Price, 80 francs. Pp. 796, with 192 illustrations. Paris: Masson & Cie, 1927.

Volume of French system of medicine, this one dealing with blood and blood-forming organs.

APPLIED PHYSIOLOGY. By Samson Wright, M.D., M.R.C.P., Department of Physiology, Middlesex Hospital Medical School. With introduction by Swale Vincent, M.D., LL.D., D.Sc., Professor of Physiology, University of London. Cloth. Price, $4.50. Pp. 418, with 37 illustrations. New York: Oxford University Press, 1926.

The practical applications of physiologic knowledge to the care of disease.

DISEASES OF THE HEART: Their Diagnosis, Prognosis, and Treatment by Modern Methods. By Frederick W. Price, M.D., F.R.S., Physician to the National Hospital for Diseases of the Heart. Second edition. Cloth. Price, $6.20. Pp. 534, with 249 illustrations. New York: Oxford University Press, 1927.

New edition of well established monograph on the care of the heart.

CHILD LIFE INVESTIGATIONS, SOCIAL CONDITIONS AND ACUTE RHEUMATISM. Medical Research Council. Special Report Series, No. 114. Paper. Price, 2s, 6d net. Pp. 108. London: His Majesty's Stationery Office, 1927.

Special research proving that exposure to bad environment as well as contagion may be concerned in causes of rheumatism.

HELIOTHERAPY WITH SPECIAL CONSIDERATION OF SURGICAL TUBERCULOSIS. By A. Rollier, M.D. Translated by G. de Swietochowski, M.D., M.R.C.S. Second edition. Cloth. Price, $6.25. Pp. 218, with 273 illustrations. New York: Oxford University Press, 1927.

New edition of the most important pioneer work in the treatment of tuberculosis by the ultraviolet of the sun.

COMPRESSION OF THE LUNG IN THE TREATMENT OF PULMONARY LESIONS. By Stuart Tidey, M.D., M.R.C.P., Diplomate in Medicine of the Swiss Federation and of the Province of British Columbia. Paper. Price, 3/6 net. Pp. 86. New York: Oxford University Press, 1927.

The development of the ideas of external compression and of artificial pneumothorax traced by a pioneer.

THE ENLARGED PROSTATE. By Kenneth M. Walker, F.R.C.S., M.A., M.B., Lecturer in Venereal Diseases, St. Bartholomew's Hospital. Cloth. Price, $4. Pp. 193, with 60 illustrations. New York: Oxford University Press, 1926.

British monograph with emphasis on practical care of the patient with prostatic hypertrophy.

THE MODERN PRACTICE OF PEDIATRICS. By William Palmer Lucas, M.D., LL.D., Professor of Pediatrics, University of California Medical School. Cloth. Price, $8.50. Pp. 962, with 126 illustrations. New York: Macmillan Company, 1927.

New textbook of pediatrics with emphasis on keeping the well child well.

SAVING EYESIGHT AFTER MID-LIFE. By John Herbert Waite, M.D., S.M., Instructor in Ophthalmology, Harvard Medical School. Cloth. Price, $1. Pp. 48, with illustrations. Cambridge: Harvard University Press, 1927.

Simple information on glaucoma, cataract and similar disturbances.

MANUAL OF OPERATIVE SURGERY. By Sir Holburt J. Waring, M.S., M.B., B.Sc., Surgeon to and Joint-Lecturer in Surgery at St. Bartholomew's Hospital. Sixth edition. Cloth. Price, $5.25. Pp. 868, with 618 illustrations. New York: Oxford University Press, 1927.

Popular textbook of detail and technic in the practice of surgery.

ÉTUDES SUR LES AFFECTIONS DES OS ET DES ARTICULATIONS. (Colonne vertébrale exceptée). Par André Léri, professeur agrégé à la Faculté de médecine de Paris. Paper. Price, 58 francs. Pp. 460, with 128 illustrations. Paris: Masson & Cie, 1926.

Poorly printed textbook on diseases of bones and joints.

MANUAL OF MEDICINE. By A. S. Woodwark, C.M.G., C.B.E., M.D., Physician, Lecturer on Medicine and Dean of the Medical School, Westminster Hospital. Third edition. Cloth. Price, $4.75. Pp. 523. New York: Oxford University Press, 1927.

Guide to clinical practice apparently popular abroad.

THE PSYCHO-PATHOLOGY OF TUBERCULOSIS. By D. G. Macleod Munro, M.D., C.M., M.R.C.P. Cloth. Price, $1.75. Pp. 92. New York: Oxford University Press, 1926.

How tuberculosis affects the mind, with a special section on tuberculous genius.

THE TREATMENT OF CHRONIC ARTHRITIS AND RHEUMATISM. By H. Warren Crowe, D.M., B.Ch., M.R.C.S. Cloth. Price, $2.75. Pp. 196, with 16 illustrations. New York: Oxford University Press, 1926.

Monograph describing empirical and scientific methods in use.

OUR OWN AND OUR COUSINS' EYES. By Thomas Hall Shastid, A.M., M.D., F.A.C.S. Cloth. Price, $1. Pp. 199. Southbridge, Massachusetts: American Optical Company, 1926.

Popular lecture on evolution of the human eye.

HANDBUCH DER EXPERIMENTELLEN PHARMAKOLOGIE. Herausgegeben von A. Heffter, und W. Heubner, Professor der Pharmakologie an der Universität Göttingen. III Band. 1 Hälfte—Die osmotischen Wirkungen. Schwer resorbierbare Stoffe, usw., usw. Paper. Price, 57 marks. Pp. 619, with 62 illustrations. Berlin: Julius Springer, 1927.

REPORT OF THE HEALTH DEPARTMENT OF THE PANAMA CANAL FOR THE CALENDAR YEAR 1925. By W. P. Chamberlain, Colonel, Medical Corps, United States Army Chief Health Officer, and Dr. D. P. Curry, Assistant Chief Health Officer. Paper. Pp. 62. Mount Hope: Panama Canal Press, 1926.

ASILOS Y HOSPITALES REGIONALES EN LA REPUBLICA ARGENTINA. Previsión y asistencia social (ley 4953). Segunda serie. Periodo de Octubre 1922 al 1926. Cloth. Pp. 64, with illustrations. Buenos Aires, 1926.

LES SYPHILIS VISCÉRALES TARDIVES. Par H. Grenet, Médecin de l'Hôpital Bretonneau, R. Levent, et L. Pellissier, Interne des Hôpitaux de Paris. Paper. Price, 32 francs. Pp. 378. Paris: Masson & Cie, 1927.

REPORT OF THE STATE TUBERCULOSIS COMMISSION TO THE GOVERNOR FOR THE PERIOD BEGINNING JULY 1, 1924, AND ENDING JUNE 30, 1926. Paper. Pp. 109, with illustrations. Hartford, 1926.

BRATTLEBORO MUTUAL AID ASSOCIATION, INC. A neighborhood association for mutual help in sickness. Nineteenth annual report. Paper. Pp. 34. Brattleboro, Vermont, 1926.

THIRTEENTH BIENNIAL REPORT OF THE MONTANA STATE BOARD OF HEALTH FOR THE YEARS 1925-1926. Paper. Pp. 46. Great Falls, Montana, 1926.

REPORT OF THE SIXTH CONGRESS OF THE FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE, OCTOBER 11-31, 1925. Paper. Pp. 114, Tokyo, 1926.

Miscellany

MY BANDIT CLINIC

HARVEY J. HOWARD, M.D.
PEKING, CHINA

As a professional class, pirates, bandits and their ilk undoubtedly deserve to be called inhuman. Individually, when off duty they are essentially human. Anatomically and physiologically they differ not a whit from the rest of the human race. Furthermore, they are subject to the very same pathologic influences that sooner or later bring good men to their graves. At least so it might be said about "my bandits," who were probably of the standard variety.

After the novelty of my rather awkward situation as a captive gradually wore off, I found myself unable to look on my captors in a more personal sense than as patients. This was fortunate, for it enabled me to minimize my own predicament and discomfort, by becoming absorbed in the physical and mental ills of others who, to all appearances, were more unfortunate even than I. To my surprise, the majority of those brigand companions of mine needed a physician, and some of them very badly.

By the time a Chinese bandit reaches the age of manhood he undoubtedly is steeped in prejudices as deep, and is heir to superstitions as crude, as are other human beings who are either ignorant of, or blind to the science of creative evolution and all that goes with it. But my captors had no misconception about the deadly effect of modern rifles. They had seen too many of their enemies and comrades bite the dust in death agony to take unnecessary chances themselves with the tiny bits of steel or lead that come out of those rifles. Their knowledge thereof was born of experience, and plenty of it.

But with modern medicine the bandits had had no experience. They were curious about it, just as people were a few hundred years ago when certain wise men told them that the earth was round, not flat; they did not believe the wise men, but they were tickled with the new idea, for it gave them a chance to argue in a superior way on behalf of an inherited belief which *they* knew to be absolutely true, and to feel sorry for the other fellow's breakdown in mentality.

Powdered deer-horn and dragon's teeth (in reality the teeth of fossil animals that lived in China a million or more years ago) are almost as costly as gold dust, but several of the bandits had a supply of each and had great faith in the efficacy of these inert substances to heal bullet wounds and other external lesions. When their supply gave out, they discussed their dilemma with a few brave comrades who had already sought my aid and had not died as a result. And so it came about finally that I counted the whole bandit gang among my clientele.

When one possesses no medicines and none but the crudest surgical instruments, he can scarcely be said to be in a position to practice modern medicine. But if a recent definition of modern medicine be correct, in that it is the art of making proper diagnoses, then perhaps I might qualify in a humble way as having practiced modern medicine among the Black Dragon River bandits, with whom I lived for ten weeks in northern Manchuria during the summer of 1925. But it must not be taken for granted that "my bandits" were satisfied merely with my opinion as to what was the matter with them. My task was not as easy as that.

I took stock of my available armamentarium and made a mental list of the following items: (1) sunshine, but generally not more than five or six hours of it a day; (2) pure air, outside of the cramped living quarters where most of the bandits preferred to spend all their days and nights when not in flight from the soldiers; (3) plenty of good water, which could easily

be boiled if necessary; (4) two cakes of perfumed soap; (5) exceedingly plain food—millet, unground corn, unrefined salt, and occasionally vegetables and fish; for drinking purposes a weak coffee made of kaoliang (a variety of sorghum seeds); (6) starvation diet, if necessary; (7) an ability to massage (learned in medical student days); (8) a little acetylsalicylic acid powder, a small bottle of iodoform powder, and a very small package of sterile cotton (all possessed by one of the bandits); (9) a crude Chinese razor, and two opium-pipe probes; (10) a considerable quantity of crude opium (each of the bandits had several ounces).

Several of the bandits had bullet wounds, two of them bone injuries followed by chronic osteomyelitis; so the small supply of iodoform powder and sterile cotton soon disappeared. I persuaded the bandit who had permitted me to use these precious supplies also to give me his acetylsalicylic acid, which I wanted for my own use. During the last two weeks of my captivity, I was fortunate to have it, for the aches and pains resulting from lying night after night on the cold ground, in a rapidly dropping temperature, were sufficiently relieved a few times by this drug to permit me to get a little sleep. The bandits often urged me to smoke their opium because of my inability to sleep, but I refused their offer with thanks. Out of curiosity I smoked once, but noticed only a very slight effect from it.

With but few exceptions all the bandits smoked opium. Some of the older men smoked as much as three or four ounces a week when they were idle. I was surprised to find them so robust and vigorous after I learned that most of them had used opium for ten years or more. I concluded that the severe physical life which they were forced to endure much of the time prevented them from becoming the emaciated and sordid human wrecks seen so often in addicts among the leisured class. One effect from opium smoking is loss of appetite, which probably explains the emaciation generally seen; but, in the case of the bandits, the forced marches and the exercise incidental to their getting something to eat every day and a place to sleep every night evidently counterbalanced the effect of their opium smoking, for there were no examples of small appetites among them, as far as I could judge.

However, after a period of idleness several of the opium smokers complained of gastro-intestinal distress. My advice that they reduce their consumption of opium met with no response; but since they expected me to give them some relief I thought it wise to devise other methods which would sound more "practical." The opium had undoubtedly produced an atonic state of the gastro-intestinal tract, so I persuaded some of the bandits to drink a great deal of hot water, to eat more food, and to exercise more—the object being to stimulate peristalsis. When carried out, this advice always brought good results. Two of them also refused to carry out these suggestions, so on them I tried abdominal massage and found that it worked exceedingly well. But within a few days my enthusiasm for giving the latter form of treatment rapidly waned, for many of the bandits shortly began to have all kinds of aches and pains which they wanted me to rub away. It was surprising how many headaches those fellows developed. Evidently they thoroughly enjoyed the treatment, which was sometimes so effective that they went sound asleep as soon as I had finished.

During the summer months the flies were a pest, but the bandits never, except when on flight, ate anything but hot food or drank anything except boiled water, so the danger from dysenteric disease was very slight. The bandits devoured their hot food too rapidly for the flies to bother them. The camp quarters were clean, but just beyond the wall of the stockade the bandits deposited their excreta in a shallow trench. This trench was never covered, so the possibility of dissemination of infection existed. Two of the bandits did develop a severe diarrhea which I was able to control in three or four days by persuading them to adopt a regimen of rest and starvation. They had at first allowed their own medicine-men to prick holes in their skin with a shoemaker's needle, and to burn them over the involved region with lighted incense sticks and moxas in order to drive the evil "winds" out.

As long as Tso Shan's very meager supply of paper held out I wrote prescriptions for some of the men which I told them they could get filled at any hospital or pharmacy in Harbin—a city where some of them spent the winter months. A number of the bandits had skin diseases, such as ringworm and Hong Kong foot. The chief of the mounted bandits who captured me had a chancre on the penis; another young brigand had a gonorrheal urethritis. Judging from their daily conversation, I surmised that they had all been exposed many times to venereal infections.

The majority of the bandits were nearsighted—a condition determined by comparing their ability with mine in distinguishing distant objects. Their defect did not surprise me, since my examination of Chinese patients for more than a decade had revealed that nearly 60 per cent were myopic. None of the bandits wore spectacles (a Chinese cannot wear *pince nez*), but they took an undue interest in mine. Sometimes I had great difficulty in restraining them from keeping the spectacles, for the nose piece and temples were made of 18 carat gold. Each bandit in the gang tried them on several times—a proceeding which annoyed me almost as much as their using my towel. I feared, of course, that the spectacles might be broken, but my chief anxiety was concerning the possibility of my becoming infected with trachoma. Naturally I cleaned the spectacles thoroughly whenever I got them back.

I took the opportunity to examine all of the bandits' eyes for trachoma, and found clinical evidence of the disease in about 40 per cent. Several had corneal maculae as a result of ulcers due to trachoma. A dozen or so had pannus in varying degrees. The "old" ex-chief, Jih Pen Tzu, the one who befriended me and with whom I shared a tiny mosquito tent for fifty-eight nights, had trachoma the worst of all. He developed two acute attacks of superficial keratitis with multiple ulcers while I was with him. With hot compresses alone, applied almost continuously for two or three days, I was able to bring him out of each attack comfortable and happy, and with his vision better than it had been for months. Undoubtedly it was my success in treating Jih Pen Tzu's eyes which gave him and the other bandits an increasing confidence in me as the long days and the still longer nights passed by.

It is not an exaggeration to state that this confidence gradually developed into a sort of friendship between Jih Pen Tzu and me—a friendship which exists to this day, for to Jih Pen Tzu I must give the credit for saving my life. As evidence of his attitude, I might add that he has sent me my ring which had been taken from me by another bandit. Furthermore, during the past year we have carried on a considerable correspondence in the Chinese language. Only last week he sent me his photograph with a request that I send him mine and also one of my family.

According to his last letter, he will come to Peking to see me as soon as traffic is resumed on the Sungari, which is ice-bound during the winter months. He is coming, he says, to get me to "cure his trachoma," and after that he hopes that I will get him "a suitable job in Peking." Each of these objects obviously offers certain difficulties, but the latter certainly more than the first. At any rate Jih Pen Tzu evidently trusts me not to deliver him over to the military authorities, and in that assurance he is safe.

Human Nature and Interest.—What human nature . . . demands in civilization, if it is to stand as high and satisfying civilization, is best described by the word interesting. Here is the extraordinary charm of the old Greek civilization: that it is so interesting.—Arnold: Civilization in the United States, p. 170.

Medicolegal

Retroactive Barring of Actions for Malpractice

(Kozisek v. Brigham (Minn.), 210 N. W. R. 622)

The Supreme Court of Minnesota says that in this action to recover damages for the alleged malpractice of a surgeon the cause of action, if any, accrued before the passage of chapter 113 of the general laws of Minnesota of 1925, which amend section 9193 of the general statutes of 1923. The latter provided that "The following actions shall be commenced within two years: 1. For libel, slander, assault, battery, false imprisonment, or other tort, resulting in personal injury," while the former—chapter 113—added, "and all actions against physicians, surgeons, dentists, hospitals, sanitariums, for malpractice, error, mistake, or failure to cure, whether based on contract or tort." Section 2 provided, "This act shall take effect and be in force three months from and after its passage and approval." If this law applies to causes of action accrued before its enactment but not then barred by the six-year limitation of section 9191 of the general statutes of 1923, which formerly applied to actions such as this, the defendant's demurrer to the complaint in this case should have been sustained, as this action was not commenced until after the three months' suspensory period. No other reason appearing for the suspension for three months of the effect of a statute reducing the limitation on certain actions from six to two years, this court holds it to be clear that the legislature intended to make the act applicable to causes of action existing at the time, and that the delay was for the very purpose of permitting actions to be brought thereon before the statute became effective. It is for the legislature to fix such limitations, and if a reasonable time is allowed for the commencement of actions on existing causes of action, such a statute cannot be invalidated as unconstitutional. This court cannot say that the three months allowed in this case was unreasonable. Therefore the order of the trial judge in overruling the defendant's demurrer to the complaint in this case is reversed.

State Hospital Not Liable for Its Disposal of Body

(University of Louisville et al. v. Metcalfe (Ky.), 287 S. W. R. 945)

The Court of Appeals of Kentucky says that section 2645 of the statutes of that state make it the duty of any person having in his possession the dead body of any person which may be unclaimed to notify the relatives or friends of the deceased, if they are known, and on their failure within three days to claim and bury the body, it shall be the duty of the person having possession of the body, on the demand of a professor of a medical college or school, to deliver the body to the professor, who shall have it embalmed and preserved for thirty days before dissecting it. Plaintiff Metcalfe's husband died while an inmate of the Western State Hospital. Relying on the fact that the hospital authorities did not hold the body for three days, and on the further fact that the authorities of the University of Louisville, to which the body was shipped, dissected one of the hands before the expiration of thirty days, this action was brought against the hospital, its superintendent and the university, to recover damages. There were three trials of the action. The first trial resulted in a verdict against each defendant for $18,000, which was set aside. On the second trial there was a verdict for $12,000, which was also set aside. On the last trial the jury found in favor of the superintendent, but awarded $5,000 damages against the hospital, and a like sum against the university; but the judgments against the hospital and the university are reversed, and the cause remanded with directions to dismiss the plaintiff's petition.

With regard to the state hospital, the court deems it sufficient to say that an asylum, or as it is now called a hospital, created and maintained at the expense of the state for the care of the insane, is a mere instrumentality of the state government brought into being to aid in the performance of a governmental duty, and is not therefore liable in damages for either the negligent or malicious acts of its officers, agents or employees. The only exception to this rule is where the institution commits a nuisance and thereby injures the property of another or otherwise takes and injures the property of another without making just compensation therefor, as required by section 242 of the state constitution. But this case did not fall within the exception, for whatever may be the nature and extent of one's property right in a corpse, it is not the kind of property that may be condemned, and is not therefore protected by section 242 of the constitution.

Nor was there any merit in the contention that the hospital authorities were not performing a governmental duty in sending the corpse to the university, because they were not then engaged in the care of the insane, but were acting under a statute regulating the disposition of unclaimed bodies. The disposition of the bodies of the insane is as much a governmental function as their care and maintenance during their lives, and when the superintendent of a hospital acts under the statute he simply performs a duty imposed on him as the agent of the hospital, and the hospital in acting through him acts as an arm of the government and not in a private capacity. It followed that the hospital's demurrer to the plaintiff's petition should have been sustained and the petition dismissed.

The University of Louisville challenged the jurisdiction of the court on the ground that it was a nonresident of the county where the action was brought, and had been summoned out of the county. Although the hospital was improperly joined, and its demurrer to the petition should have been sustained, yet, as a cause of action was stated against its superintendent, one of the local defendants, this was sufficient to give the court jurisdiction until judgment was rendered in his favor. When this occurred the court lost jurisdiction of the nonresident (speaking of the county) defendant, University of Louisville, and should have sustained its motion for a judgment notwithstanding the verdict, and have ordered the petition dismissed.

Authority of Foreman to Send Employee for Treatment

(Bock v. P. J. Keogan, Inc. (N. Y.), 218 N. Y. Supp. 83)

The Supreme Court of New York, appellate term, first department, in affirming a judgment for the plaintiff, says that the evidence of a workman injured in the employ of the defendant tended to show that a few days after his injury he was directed by the defendant's foreman to go to a hospital for treatment. He was there treated by the plaintiff, who afterward rendered to the defendant a bill for services, and subsequently brought this action to recover for the services. The defendant contended that a judgment for the plaintiff could not be sustained, in the absence of proof of a contractual relation between the defendant and the plaintiff; that the foreman was without authority to obligate the defendant for the services rendered under the disclosed circumstances. If the court were dealing with a question of pure agency, no doubt the defendant would be right in its position. But the rights of the plaintiff did not depend on mere agency. His rights were based on a statute—the workmen's compensation law of the state, section 13 of which provides that the employer shall promptly provide for an injured employee such medical, surgical or other attendance or treatment as the nature of the injury may require, during sixty days after the injury. If the employer fails to provide this, after request by the injured employee, the latter may do so at the expense of the employer. But the employee shall not be entitled to recover any amount expended by him for such treatment or services "unless the nature of the injury required such treatment and services and the employer or his superintendent or foreman having knowledge of such injury shall have neglected to provide the same."

It has been held by this court that under this section an employer who furnishes the medical services required by the statute is liable to the physician who performs the services in an action at common law, and that the physician's charges are not in such case a part of the employee's compensation allowable under the statute. While recognizing these deci-

sions, the defendant contended that they were not controlling, for the reason that in those cases the contract between the physician and the employer seemed to have been admitted. Here it was urged such contract was denied because of lack of authority in the defendant's foreman. But this court is unable to agree with the contention that the defendant was not bound by the foreman's act. Under the section involved, the court is of the opinion that a superintendent or a foreman has implied power to act on behalf of his employer in directing the injured employee to go to a particular hospital or physician for treatment.

There is strong reason for this interpretation. Injuries to workmen happen suddenly, and frequently in the absence of the individual employer or duly authorized officers of a corporate employer. In many instances, therefore, it would not be practical, if, indeed, possible, for foremen or superintendent to secure promptly express authorization to provide medical or surgical treatment. This might, and probably would in many instances, result in grave injustice, not only to the injured employee but also to the employer. Because of the resulting delay which in many instances might be regarded as tantamount to a refusal to furnish services, the employer might be deprived of the right so to do. Moreover, it is to be observed that, when the injuries are of a nature requiring treatment, a foreman who has knowledge may secure medical treatment. If he fails so to do, the employee may then act. It seems to follow of necessity that the statute gives to the superintendent or foreman having knowledge of the nature of the injury the right in the first instance to procure the treatment or services.

In the instant case it was after a report, made by the employee to his foreman, that the services of the plaintiff at the direction of the foreman were employed. The foreman was the agent of the defendant for such purpose, and the employer, therefore, should respond for the value of such services. It follows that the judgment for the plaintiff should be affirmed, with $25 costs.

Strangulation of Existing Hernia Compensable Injury

(Krenz v. Ferguson Coal Co. (Ind.), 154 N. E. R. 35)

The Appellate Court of Indiana, in reversing an award of the industrial board that the claimant take nothing under the workmen's compensation law, says that from all the evidence it was apparent that the industrial board was justified in finding that his hernia did not result from an accident on Dec. 21, 1925; but from uncontradicted evidence it was clear that there was a strangulation of the hernia on that day, resulting from the handling of a big chunk of coal. A strangulation resulting from an accident that was so serious as to require a surgical operation to reduce it was certainly such an injury as should come within the scope of compensation law.

Myelogenous Leukemia and Accident Causing Death

(Standard Acc. Ins. Co. v. Hoehn (Ala.), 110 So. R. 7)

The Supreme Court of Alabama, in affirming a judgment in favor of plaintiff Hoehn on a policy of accident insurance, says that the insured met with an accident, May 20, 1924, in which his heel was broken and he was perhaps otherwise injured, although there was no external or visible sign of it. The great weight of the evidence went to show that the predisposing cause of his death on July 1, 1924, was myelogenous leukemia, from which he had suffered for some time before the accident, not, however, to a degree that disabled him from performing his active duties as a locomotive engineer; but it appeared with equal certainty that the injury or injuries he suffered on the occasion of the accident hastened his death and in that sense and meaning were a contributory cause. The defense was that the insured died of disease and hence that the contingency of his death was not covered by the policy in suit, which insured him "against loss resulting from bodily injuries effected directly, exclusively and independently of all other causes through external, violent and accidental means." Moreover, this policy provided that "This insurance shall not cover accident, injury, loss of limb or sight, or disability which shall result wholly or partly, directly or indirectly from war or riot, from bodily or mental infirmity, or from disease in any form." But the policy appeared to discriminate between disability and death, and it might reasonably be said that the last-quoted provision dealt with cases of disability and not death. In the judgment of this court the policy required that the accident should be the efficient cause of the loss suffered, whether as disability or death; that is, the cause acting as the immediate agency in the production of the loss. The provisions of the policy with respect to the point under consideration being dubiously framed, the interpretation should be in favor of the insured, rather than otherwise; and the question of liability was one for jury decision.

Obstetrician Not Wearing Sterilized Gown and Gloves

(Hammer v. Klegger (S. D.), 210 N. W. R. 667)

The Supreme Court of South Dakota says that two separate actions, brought by husband and wife against the defendant physician who attended the wife at childbirth, were tried together and resulted in verdicts for the plaintiffs, but the defendant moved for judgment in both cases, notwithstanding the verdicts, and, his motions being granted, judgments were entered thereon in his favor, which are here affirmed. He made only one visit to the woman, when he delivered the child, and the mother and child were placed in charge of a woman who was there for the purpose of caring for them. Three or four days later the mother had a chill followed by fever, and as the defendant could not be reached just then another physician was called, who found the patient suffering from septicemia and had her removed to a hospital. The infection was located in the uterus.

It was contended by the plaintiffs that the defendant was negligent in not wearing a sterilized gown and sterilized rubber gloves while he was examining the patient and delivering the child, and that because of this failure he might have introduced the germs that caused the infection. However, the undisputed evidence showed that, before the defendant examined the patient or performed any other duty in connection with her confinement, he put on a sterilized rubber apron, that he washed his hands thoroughly with soap and water, and then dipped them in compound solution of cresol. The defendant testified that this was a sufficient precaution to prevent the introduction of disease germs, and that it was the common practice among the practitioners in that vicinity. In this he was corroborated by other reputable physicians practicing in the vicinity. The supreme court is of the opinion that the trial court was warranted in holding with the defendant in this charge.

Another contention of the plaintiffs was that, after the patient was removed to the hospital, the physician who attended her there found a piece of placenta, about the size of an egg, in the uterus; that this was decomposed and might have been the cause of the infection; that it was the duty of the defendant to make a sufficient examination of the placenta, when it was removed, to ascertain that a portion of it still remained in the uterus, and to remove it; that in failing to take this precaution the defendant was guilty of actionable negligence. But on the charge that the infection might have been caused by leaving a fragment of the placenta in the uterus, the evidence was unsatisfactory. The physician who had charge of the patient during her sickness necessarily became the principal witness for the plaintiffs. He did not testify, however, that he believed the patient's infection was caused by the alleged negligent conduct of the defendant. He merely said that it might have resulted from his conduct. It was shown that the patient had pyorrhea, and the witness admitted that this might have caused the infection. It was shown that she had had influenza some two years prior to her confinement and that influenza frequently leaves the patient with a weakened and impaired heart. It was also shown that the patient was in a somewhat run-down or weakened condition at the time of her confinement and that her infection might have been caused by the latent germs in the genital tract. Moreover, the physician testified that if that was placental tissue left in the uterus he could not say positively

that it was the cause of the septicemia; that the infection might possibly have been caused by forty other things. This was as near to a certainty as the evidence came to connecting the patient's sickness with any conduct of the defendant. There was no degree of certainty whatever that any negligence or alleged negligence of the defendant caused her sickness. It was not shown by any satisfactory evidence that the conduct complained of constituted negligence, or that such conduct caused the injury, if it was negligent, and the trial court was fully warranted in setting aside the verdicts and entering judgments for the defendant.

Society Proceedings

COMING MEETINGS

American Association for the Study of the Feebleminded, Cincinnati, June 4-6. Dr. H. W. Potter, Thiells, New York, Secretary.
American Climatological and Clinical Association, White Sulphur Springs, W. Va., May 23-27. Dr. A. K. Stone, Auburn Street, Framingham Center, Mass., Secretary.
American Gynecological Society, Hot Springs, Virginia, May 23-25. Dr. F. E. Keene, Medical Arts Building, Philadelphia, Secretary.
American Laryngological Association, Atlantic City, May 23-25. Dr. G. M. Coates, 1721 Pine Street, Philadelphia, Secretary.
American Laryngological, Rhinological and Otological Society, Atlantic City, May 26-28. Dr. R. L. Loughran, 33 East 63d Street, New York, Secretary.
American Neurological Association, Atlantic City, May 24-26. Dr. H. A. Riley, 870 Madison Avenue, New York, Secretary.
American Ophthalmological Society, Quebec, Canada, June 27-29. Dr. Emory Hill, Professional Building, Richmond, Va., Secretary.
American Psychiatric Association, Cincinnati, May 31. Dr. E. D. Bond, 4401 Market Street, Philadelphia, Secretary.
American Psychopathological Association, Cincinnati, June 3. Dr. M. W. Peck, 520 Commonwealth Avenue, Boston, Secretary.
American Urological Association, Baltimore, May 23-25. Dr. H. G. Hamer, 723 Hume-Mansur Building, Indianapolis, Secretary.
Connecticut State Medical Society, Hartford, May 25-26. Dr. C. W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.
Illinois State Medical Society, Moline, May 31-June 2. Dr. H. M. Camp, Lahl Building, Monmouth, Secretary.
Maine Medical Association, Portland, June 13-15. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.
Massachusetts Medical Society, Boston, June 6-8. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.
Michigan State Medical Society, Mackinac Island, June 14-17. Dr. F. C. Warnshuis, Grand Rapids National Bank Bldg., Grand Rapids, Sec'y.
Minnesota State Medical Association, Duluth, June 30-July 2. Dr. E. A. Meyerding, 11 West Summit Avenue, St. Paul, Secretary.
Montana, Medical Association of, Missoula, July 13-14. Dr. E. G. Balsam, 222 Hart-Albin Building, Billings, Secretary.
National Association for the Study of Epilepsy, Cincinnati, May 30-31. Dr. A. L. Shaw, 108B Olbiston Building, Utica, N. Y., Secretary.
National Tuberculosis Association, Indianapolis, May 23-26. Dr. G. M. Kober, 1819 Q Street, N.W., Washington, D. C., Secretary.
New Hampshire Medical Society, Portsmouth, June 22-23. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.
New Jersey, Medical Society of, Atlantic City, June 9-11. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.
North Dakota State Medical Association, Grand Forks, June 1-2. Dr. J. G. Lamont, San Haven, Acting Secretary.
Rhode Island Medical Society, Providence, June 2. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.
West Virginia State Medical Association, White Sulphur Springs, June 21-23. Mr. Joe W. Savage, 303 Professional Building, Charleston, Executive Secretary.
Wyoming State Medical Society, Cheyenne, June 27-29. Dr. Earl Whedon, Sheridan, Secretary.

TENNESSEE STATE MEDICAL ASSOCIATION

Ninety-Fourth Annual Session, held, April 12-14, 1927, at Chattanooga

(Concluded from page 1596)

Urologic Problems of Interest to the General Practitioner

DR. GEORGE R. LIVERMORE, Memphis: When a patient passes blood-stained urine, no one can tell from the appearance of the urine the source of the blood or the seriousness of its import. It is essential for the urologist to see the patient while the hemorrhage is present, because after it has ceased it may be impossible to locate its origin. Infections of the urinary tract are often neglected or passed over with such scant examination that irreparable harm is done before the patient comes to the urologist. Nothing is simpler to cure than an acute pyelonephritis that the urologist sees before the infection is deep-seated and before inflammatory changes have occurred in the kidney, or thickening, dilatation and kinking of the ureter have taken place. Pus in the urine should never be neglected. Contrary to the general belief, renal or ureteral colic is not always due to a stone in the kidney or the ureter. A calculus may be present in both localities without pain or other subjective symptoms referable to it. A focus is necessary for the development of kidney or ureteral infection. Stasis plays an important rôle. Many cases of infection would not occur were stasis not present. When a patient has pus in the urine, with or without symptoms of cystitis, and is having a daily rise of temperature or a chill followed by fever, the infection has involved the kidneys. Stricture of the urethra plays a prominent part in such infections. The earlier the obstruction is relieved, the less likelihood of permanent injury. Pus, blood or bacteria in the urine call for a thorough urologic examination.

Hydronephrosis

DR. C. F. ANDERSON, Nashville: Hydronephrosis is probably the most frequent abnormality encountered in pyelography. Our best hope for diagnosing these cases early lies in the practitioner who keeps this condition in mind and urges urologic examination when indicated. In the early cases, conservative measures are as clearly indicated as nephrectomy in the late ones. If one can relieve a strictured or kinked ureter before permanent harm has been done to the kidney, it will resume its normal function. Replacing ptosed or movable kidney, often removing the cause, will sometimes suffice.

Early Diagnosis of Renal Tuberculosis

DR. RUSSELL A. HENNESSEY, Memphis: The true incidence of renal tuberculosis is conjectural. Autopsy reports indicate that tuberculous involvement of the kidney occurs in tuberculous subjects more frequently than is generally appreciated. The development of an insidious, progressive cystitis which does not yield promptly to the usual methods of treatment, and in which a sterile pyuria is found, demands a careful and painstaking investigation for a urinary tuberculosis. The tuberculous urine seems to possess a definite inhibitory or bacteriostatic action. It has been estimated that roentgen-ray examination is positive in from 15 to 30 per cent of all cases of renal tuberculosis. Information gained by visualization of the bladder may be of value in early renal tuberculosis, but positive information can be gained only by catheterization of the ureters and examination of the segregated kidney urines. Functional tests are most valuable guides in the surgical treatment of renal tuberculosis. The value of thorough physical examination is evident from the experience of numerous observers, who find associated tuberculous lesions in 80 per cent. The treatment of renal tuberculosis is essentially surgical, and the success of surgical treatment is largely dependent on the early recognition of this lesion.

Mercurochrome and Gentian Violet in the Treatment of Septicemia

DR. C. N. COWDEN, Nashville: The preparation of the drug for use is quite simple. Enough mercurochrome-220 soluble is added to hot distilled water to make a 1 per cent solution. It is not necessary to sterilize it, as it is sufficiently antiseptic. The solution should be made fresh each time. A large, graduated syringe is filled with the proper dose of the solution, a good sized vein selected, usually at the bend of the elbow, and through a good sized needle the solution is slowly injected. The dose is 5 mg. to a kilogram of body weight and can be given up to 7 or 8 mg. to the kilogram. This can be repeated in from three to five days. The gentian violet solution is prepared in exactly the same way, but is used in a 0.5 per cent solution and given in double quantity. The patient becomes very blue immediately after the injection, but that condition endures only a very short time.

Treatment of Septicemia with Mercurochrome

DR. HILLARD WOOD, Nashville: I have used mercurochrome intravenously in three cases. Two patients had mastoid abscess with thrombosis of the lateral sinus. One patient had a blood stream infection of *Streptococcus brevis* of the viridans type, coming presumably from the middle ears. The patient recovered without operation. In each of the three cases everything that numerous consultations could suggest had been done without apparent improvement in the patients' condition. In each case

permanent improvement began with the administration of mercurochrome. Two intravenous injections were given. In none of the cases was there evidence of nephritis, either before or following the administration of mercurochrome.

Ringworm of the Feet

DR. HOWARD KING, Nashville: There are four types: The peeling or desquamative, the dyshidrotic or vesicular, the eczematoid, and the keratotic. In all types there may be involvement of the nails. The treatment consists of the use of Whitfield's ointment, some solution of iodine, and chrysarobin, from 3 to 5 per cent, in traumaticin. Mercurochrome I have found of little value. Occasionally, a 5 per cent solution of thymol in alcohol acts better in conjunction with Whitfield's ointment than the iodine solution. In all cases of much rawness or secondary infection it is best to postpone the use of Whitfield's ointment or antiparasitic remedies until the infection and rawness have subsided. For acute pus infection there is nothing equal to continuous hot wet dressings of saturated boric acid solution. In all cases the roentgen ray is of great aid and is best given in one-half to three-quarter skin unit doses, every two or three weeks, along with other remedies. It is advisable to treat the previously infected parts for two or three weeks after apparent cure.

Hemolytic Jaundice

DR. W. C. DIXON, Nashville: I have to report one case in which complete recovery followed splenectomy. The type was not determined.

Clinical Significance of the Sedimentation Test in Gynecology

DR. W. T. BLACK, Memphis: The sedimentation test is a good adjunct to the temperature and blood examination. It is a more sensitive test and is of value in determining the time to operate in acute pelvic infections. The test has proved of value in my series of 150 cases. It will foretell in pelvic conditions the severity of the infection earlier than the temperature and leukocyte count. When the temperature and leukocyte count have subsided, the sedimentation test will act as a signal of danger.

Treatment of Cancer of the Uterus with Radium

DR. E. DUNBAR NEWELL, Chattanooga: Radium alone will cure from 50 to 75 per cent of the cases of cancer of the cervix, if radiation is given in the distinctly operable stage. In the borderline stage, radium alone, or radium plus deep roentgen-ray therapy will cure from 20 to 25 per cent. In the distinctly inoperable stage, radium, plus deep roentgen-ray therapy, will cure from 10 to 20 per cent. In the apparently hopeless stage, an occasional life will be saved. In cancer of the body of the uterus, panhysterectomy is the treatment of choice, if there are no contraindications to such a major operation. If there are such contraindications, radium and deep roentgen-ray therapy should be used. The best results from the use of radium can be obtained only by the most careful study of the technic of application in each individual case; by long experience and full knowledge of the properties of this element, and the reaction of normal and neoplastic cells to its rays.

Charity and Eugenics

DR. R. B. WOOD, Knoxville: Race betterment cannot be accomplished by making the poor rich or the sick well or teaching the feebleminded and those with inferior intelligence how to exist and multiply, but by encouraging and making possible early and fruitful marriage among the mentally superior. We need improvement in the germ plasm rather than in body plasm. America is protecting her physically and mentally weak as no other nation has ever done. She is spending billions in caring for her defectives. In 1925 and 1926 Tennessee spent $2,242,738.00 for the maintenance of her penal institutions. Race improvement can be attained through only two possible courses: first, reduction of the birth rate of the less desirable element, and, second, increasing the more desirable. The aim of eugenics is to increase marriage in those physically and mentally fit, secure an adequate birth rate from these marriages, and weed out from the possibility of reproduction human stocks bearing serious defects. This can be done partially by legislation, partly by education. Laws prohibiting the marriage of those definitely insane with transmissible possibilities would aid. Sterilization of those having transmissible, undesirable mental traits would also aid.

Insanity: A Plea for Its Prevention

DR. H. E. GOETZ, Knoxville: While heredity is a strong factor in the causation of insanities and abnormal mental and nervous behavior, it does not follow that it is always a direct cause. While it is entirely possible that the psychic influence over the body is more potent than the physical influence is over the mind, such influences are marked and their removal is a long step in prevention. Psychanalysis is frequently the key to recovery in the milder forms, and therefore preventive. Persons who know of their possible hereditary tendencies to mental or nervous instabilities should be advised against worry and stress. Parents and educators should be informed as to the formative period of the life of the child, and that brain and brawn must be developed hand in hand if the future citizen is to be a stable one. Pregnant mothers should be guarded against the toxemias of that period, that they may retain their mental balance and engender their offspring with proper opportunities. Fathers should be advised against the excessive use of alcohol during their reproductive lives lest their children be neurotics, psychopaths and moral derelicts. The use of habit-forming drugs over protracted periods should be forbidden in all pregnant women for the same reason. Obstetricians should resort to instrumental deliveries only when no other recourse is possible. I advise that all pregnancies in dementia praecox and manic depressive cases be terminated early; likewise when active syphilis is present in the mother. All imbeciles, idiots and dementia praecox, manic depressive and old syphilitic patients should be sterilized.

The Physician of Yesterday, Today and Tomorrow

DR. MARVIN F. HAYGOOD, Knoxville: Those who have preceded us in the practice and establishment of this, the great humanitarian, profession have not all been heroes or men of great piety. Nor did they to a man use to the best advantage possible all of the opportunities afforded them, or all engage in this service to the "lame, the halt, and the blind" free of selfishness. Every age has produced its cults and every season its particular brand of quackery, but more and more they sought diligently for the truth. Our true forerunners have been the masters of the art in their day and generation. We are still traveling in the line of progress. Almost within the memory of all of us there has been more advancement in scientific medicine than during the preceding thousand years. Our professional attainments have been so markedly significant that men of great material wealth are coming to our rescue. The results are not yet satisfying but give us courage.

Fractures of the Elbow

DR. DUNCAN EVE, JR., Nashville: Fractures of the elbow occur more frequently in children than in adults. A knowledge of the roentgen-ray appearances of the elbow bones at different stages of their development is important to make an accurate diagnosis. Immediate reduction should be made and active motion instituted as early as possible, avoiding movements which produce pain.

Intellectual Learning.—Learning things because of curiosity without reference to the use of that knowledge is really one of the largest normal activities of man. Knowledge-getting because of curiosity is analogous to food-getting because of hunger. One wants the food when hungry whether he knows anything about its functional value or not. The hunger is nature's way of ascribing value to things that the man needs. Equally, the healthy mind wants to know the things that appeal to the mental appetite without care at the time as to their practical application. This knowledge-hunger is nature's method of ascribing value to things that the man needs—when he is too immature or too stupid to know what he needs. Such strong and continuing instincts impel only to things that are on the whole useful and necessary.—Bobbitt: The Curriculum, p. 10.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American J. Roentgenol. & Rad. Therapy, New York

17: 201-304 (Feb.) 1927

Bone Diseases in Infancy and Childhood. E. L. Jenkinson and P. Lewin, Chicago.—p. 201.
Review of Four Hundred and Fifty Roentgen-Ray Examinations of Shoulder. J. M. King, Jr., and G. W. Holmes, Boston.—p. 214.
*Generalized Carcinomatous Metastasis of Bones. M. A. Walker, Dillon, Mont.—p. 219.
*Hunger Pain. C. L. Martin and F. T. Rogers, Dallas, Texas.—p. 222.
Distribution of Radiation About Target of Roentgen-Ray Tube. J. L. Weatherwax and H. M. Sharp, Philadelphia.—p. 227.
Roentgen-Ray Doses Required to Produce Clinical Erythema. E. T. Leddy, Rochester, Minn.—p. 230.
*Rationale of Radiotherapy in Hodgkin's Disease and Lymphosarcoma. A. U. Desjardins, Rochester, Minn.—p. 232.
*Radium and Hemorrhage. J. O. Bower and J. H. Clark, Philadelphia.—p. 247.
*Roentgen-Ray Anatomic Study of Colon of Pulmonary Tuberculosis Patients. B. Halpert, Baltimore, and H. L. Sampson, New York.—p. 253.

Generalized Carcinomatous Metastasis of Bones. — In August, 1925, Walker's patient, aged 45, discovered a small, painless and insensitive lump in the left breast. In February, 1926, a surgeon removed her left breast and axillary glands. A microscopic examination of the growth was not made. In April, 1926, she suffered from a very severe stomatitis, undoubtedly mercurial in origin. The patient complained of moderate intermittent pain in the right subscapular region. Roentgenographic examination of the thorax showed no abnormality of its contents, but all bones in the field of this roentgenogram showed the presence of innumerable circular or oval areas of diminished density, having well defined smooth margins. The same condition existed in all the bones except those of the hands, feet and distal halves of the forearms and legs. The woman died in December, 1926. Complete autopsy was not obtainable, but a specimen of bone from the upper end of the humerus was removed and examined. The tumors were typical of adenocarcinoma.

Roentgenologic Evidence of Hunger Pain.—A method is described by Martin and Rogers whereby the gastric motility characteristic of hunger may be examined roentgenographically. The primary or essential element in the painful hunger contraction appears to be a complete circular constriction in the lower third of the stomach. Contractions of the upper stomach may or may not occur simultaneously with this antral contraction. During the period of incomplete gastric tetanus which may occur during hunger, several changes were observed including circular contractions of the antrum, a general shortening of the stomach and a wave distribution suggesting peristaltic activity at times. Rhythmic changes in the fundus, described by certain physiologists as the cause of the tonus changes, were not observed. These tonus variations appear to be due to partially relaxed contraction waves mostly in the lower portion of the stomach.

Radiotherapy of Hodgkin's Disease.—Four cases are cited by Desjardins to show conclusively that careful radiotherapy exerts a strikingly beneficial influence on the lymphatic hyperplasia incident to lymphosarcoma and Hodgkin's disease, and that the symptoms consequent on such adenopathy are relieved more or less completely for long or for short periods, depending on the more or less acute or chronic nature of the disease, on the stage it has reached when the treatment is started, and on the faithfulness of the patient's cooperation.

Radium Therapy for Uterine Hemorrhage.—Bower and Clark assert that the amount of radium sufficient to stop idiopathic hemorrhage, or hemorrhage due to benign uterine growths, does not produce a demonstrable microscopic change in the ovarian blood vessels or graafian follicles.

Anatomic Study of Colon in Pulmonary Tuberculosis.—The data given by Halpert and Sampson refer especially to the skeletal position of the cecum, the length and shape of the ascending colon, the shape and skeletal position of the hepatic flexure, transverse colon and sigmoid, and the skeletal position of the greater curvature of the stomach. Observations in 150 cases, seventy-five males and seventy-five females, are presented, and some of the differences noted in the two sexes are pointed out; e. g., the transverse colon was located above the level of the promontorium in 45 per cent of the males and in only 12 per cent of the females; the greater curvature of the stomach was found, as an average, to reach one vertebra lower in females than in males. A perfect fusion was inferred in 44 per cent; nonfusion, that is an absence of the so-called gastrocolic ligament, in about 33 per cent; imperfect fusion in about 15 per cent, and an irregular fusion in 6 per cent. In the remaining 2 per cent of the cases the greater curvature of the stomach was seen below the transverse colon. Adhesions between the ascending and the transverse colon were inferred in 56 per cent, and between the transverse and the descending colon in about 42 per cent of the 132 cases in which the splenic flexure was properly outlined.

Annals of Clinical Medicine, Baltimore

5: 753-831 (Feb.) 1927

Treatment of Cancer by Lead in Eighteenth Century. C. V. Weller, Ann Arbor, Mich.—p. 753.
*Physiologic Effect of External Heat on Human Body. R. Pemberton, Philadelphia.—p. 763.
*Pituitary Gland and Cholesterol Metabolism. R. C. Moehlig and H. B. Ainslee, Detroit.—p. 772.
Minimum Standard as Applied to Internal Medicine. D. S. Lewis, Montreal.—p. 780.
*Relationship Between Acute Infectious and Chronic Diseases. J. H. Barach, Pittsburgh.—p. 784.
Should Whole Wheat Products Displace Refined Products? E. Larson, University, Ala.—p. 800.
Intramuscular Abscesses Complicating Pneumonia. E. G. Wakefield, Washington, D. C.—p. 804.
*Etiologic Relationship of Monilia Psilosis to Pernicious Anemia. A. S. Warthin, Ann Arbor, Mich.—p. 808.

Effect of Heat on Body.—Pemberton advises that persons concerned with the application of heat to the human body should inform themselves as to the general nature of the reaction produced in order that there may be a more intelligent appreciation of what is accomplished and of the dangers involved.

Pituitary and Cholesterol Metabolism.—Clinical data are presented by Moehlig and Ainslee to show that the pituitary gland regulates cholesterol metabolism and the tissues of mesenchymal origin. Such diverse clinical entities as atherosclerosis, hypertension, certain types of nephritis, disturbances in blood volume, cholelithiasis, diabetes, and uterine fibroids are found to have important relations to states of pituitary hyperfunction and exhaustion. It is also pointed out that many diseases may be considered as due to exhaustion of the pituitary mechanism, just as diabetes may be, at times, due to exhaustion of the pancreatic mechanism.

Relation Between Acute Infections and Chronic Disease.—Barach endeavored to determine whether there is a relationship between certain acute infectious diseases of the first half of life and certain chronic diseases which commonly occur in the second half of life. He constructed a series of curves based on the acute infectious disease history as it occurred in a group of 142 gastro-intestinal cases, 156 cases of endocrine disturbances, 179 cases of neuroses, eighty cases of pulmonary tuberculosis, 143 cases of arterial hypertension, 226 cases of diabetes, 171 cardiac cases, and sixty-seven cases of chronic nephritis. These curves are superimposed on the all disease curve, and they revealed certain facts. In cardiac patients, rheumatic fever was the commonest acute infectious disease. In hypertension, diabetes and nephritis, typhoid was the most common disease. The pulmonary tuberculosis group showed an excess in cases of tonsillitis, acute colds and pneumonia.

Etiologic Relationship of Monilia to Pernicious Anemia.—Warthin has been unable to confirm Wood's work as to the production of a hemolytic anemia by means of feeding cultures of *Monilia psilosis* to guinea-pigs, or by means of intravenous injections in rabbits of a glucose water filtrate of living cultures of these organisms over periods of from two to six weeks. Of the strains used, only one, the Johnson-Breidigam, isolated from a case of tropical sprue, was able to produce a mycotic septicemia with focal embolic lesions, when injected in a living suspension into the blood stream. Even under these conditions, no evidence of any toxic or hemolytic action was shown. So far then as the etiologic identity of sprue and pernicious anemia, and the ability of *Monilia psilosis* to produce a hemolytic anemia are concerned, Warthin's experimental investigation is wholly negative.

Archives of Dermatology and Syphilology, Chicago

15: 241-386 (March) 1927

*Etiology of Maduromycosis. J. A. Gammel, Cleveland.—p. 241.
*Acne Agminata: True Skin Tuberculosis. E. R. Maloney, New York.—p. 285.
*Cases from Central Hospital, Bangkok, Siam. R. W. Mendelson, New Orleans.—p. 298.
*Pityriasis Rosea. R. S. Weiss. C. W. Lane and W. A. Showman, St. Louis.—p. 304.

Etiology of Maduromycosis.—Seventeen species of *Maduromycoses* belonging to different classes and genera were collected by Gammel as causative agents in this disease. There have been reported so far in the United States twenty-one cases of mycetoma, of which only three were maduromycosis. To this number are added three cases seen by other observers. The author reports one case from which he isolated and obtained a culture of *Madurella americana*.

Acne Agminata: True Skin Tuberculosis.—Acne agminata (acnitis) is classified as one of the tuberculids about whose etiology there has been considerable discussion. Maloney says that the general failure to find tubercle bacilli in stained sections, the failure to find tuberculous organisms in smears, the lack of success in producing tuberculosis in animal experimentations with material taken from these lesions and the frequent negative results in tuberculin skin tests tend to show that acne agminata, or acnitis, is not an example of true tuberculosis, but that it may possibly be accounted for by the toxin theory. However, the histologic picture in all cases reported has been that either of a tuberculous granuloma or of an arrangement closely simulating it. This is particularly true in the case reported by Maloney. He concludes that acne agminata is a true tuberculosis of the skin, and that it is probably a manifestation of allergy in a person who has an active or latent focus of tuberculosis. It is probably due to an endogenous reinoculation or reinfection.

Cases from Siam.—The cases reported by Mendelson include: papillary adenomas of the sweat glands; amebic dysentery with extensive ulceration of the colon and an external opening; endothelial sarcoma of the tongue; carcinoma of the lips and cheek in a betel nut chewer, and frambesia and gangosa.

Pityriasis Rosea.—A critical study of a series of 380 cases of pityriasis rosea is presented by Weiss et al. Cases are reported featuring lesions on the face, neck, palms, soles and scalp; concomitance of epidermophytosis and pityriasis rosea; vesicular eruptions; second attacks of the disease; persistent relapsing and recurrent eruptions, and apparent examples of infection.

Archives of Neurology and Psychiatry, Chicago

17: 285-426 (March) 1927

Attempt to Identify Central Cells Mediating Kinesthetic Sense in Extrinsic Eye Muscles. A. J. McLean, Boston.—p. 285.
*Neurologic Complications Associated with Congenital Stenosis of Isthmus of Aorta. H. W. Woltman and W. D. Shelden, Rochester, Minn.—p. 303.
*Nature of Cerebrospinal Fluid. F. Fremont-Smith, Boston.—p. 317.
Internal Hydrocephalus and Hypopituitarism. E. B. Fink, Chicago.—p. 332.
Myasthenia Gravis. M. Keschner and I. Strauss, New York.—p. 337.

Neurologic Complication of Stenosed Aorta.—Woltman and Shelden report a case of cerebral aneurysm with rupture, and a case of intermittent lameness presumably related to stenosis of the isthmus of the aorta.

Nature of Cerebrospinal Fluid.—Fremont-Smith says that there is no good evidence for the secretion of cerebrospinal fluid; that the evidence taken as a whole is overwhelmingly in favor of dialysis, and that the laws which determine the simple membrane-equilibrium existing between the plasma and the cerebrospinal fluid have a fundamental significance for the mechanism of fluid exchange in the organism.

Boston Medical and Surgical Journal

196: 421-464 (March 17) 1927

Injury to Kidney Without Open Wound. P. E. Truesdale, Fall River, Mass.—p. 421.
Dr. Robert Knox and Edinburgh Murders. W. H. Robey, Boston.—p. 427.

196: 465-508 (March 24) 1927

Staphylococcus Infection of Spinal Meninges. K. Emerson, Worcester, Mass.—p. 465.
Carcinoma of Stomach. E. R. Lampson, Hartford, Conn.—p. 468.
*Heart Attacks. H. B. Sprague, Boston.—p. 472.
Medical Practice in New England in 1792. G. Van Ness Dearborn, New York.—p. 476.

Heart Attacks.—The expression "heart attack" is used very loosely to explain a composite group of sudden or paroxysmal syndromes characterized by symptoms such as palpitation, dyspnea, chest pain, syncope, cyanosis or convulsions. Sprague thinks that a large number of these are definitely related to heart abnormalities but should be more accurately subdivided into such groups as have been suggested. Many such attacks are not cardiac in origin, and the heart should not be held responsible for the symptoms. Certain conditions which are the real causes of such paroxysms have been noted. Stress is laid on the importance in differential diagnosis of (1) a careful history of the exact symptomatology; (2) a consideration of the age and type of patient; (3) the physical examination apart from what can be found in the heart, and (4) the aid which can be secured from electrocardiographic and roentgen-ray study.

Canadian Medical Association Journal, Montreal

17: 277-388 (March) 1927

Metabolic Factors in Treatment of Tuberculosis. J. C. Meakins, Montreal.—p. 277.
Functions of Woman's Clinic. J. W. Williams, Baltimore.—p. 282.
Pain in Lower Abdomen. G. E. Wilson, England.—p. 285.
Appendix Problem. C. Howard, Kingston, Ont.—p. 289.
Focal Infection in Relation to Systemic Disease. J. W. Auld, Calgary.—p. 294.
Extra-Uterine Pregnancy: Five Cases. B. C. Hardiman, Fort William, Ont.—p. 297.
Multiple Myeloma with Widely Disseminated Metastases. A. G. Nicholls, Halifax, N. S.—p. 301.
*Anemia of Cancer of Gastro-Intestinal Tract: One Hundred and Eighty-Seven Cases. D. Eisen, Toronto.—p. 307.
*Miostagmin Reaction in Diagnosis of Carcinoma. F. Green, Montreal.—p. 313.
Deep Muscles of Back: Infantile Paralysis. I. M. Thompson, Montreal.—p. 317.
Nova Scotia's Changing Statistics. A. C. Jost, Halifax.—p. 319.
Malignancy in Dermoid Cyst of Ovary. D. S. Forster, Montreal.—p. 322.
"Saddle-Nose" Deformity in Children. J. G. Strachan, Toronto.—p. 324.
*Hereditary Abnormalities of Eye: III. Entire Eyeball. M. T. Macklin, London, Ont.—p. 327.
Treatment of Early Malignancy of Larynx by Electrodesiccation and Radium. R. H. Craig, Montreal.—p. 331.
Case of Hydrops Neonatorum. W. J. Stevens, Ottawa.—p. 333.
Injury to Right Knee: Three Cases. G. M. White, Montreal.—p. 334.
Generalized Nontraumatic Subcutaneous Emphysema in Young Child. M. W. Bloomberg, Montreal.—p. 336.

Anemia of Cancer of Stomach.—An outstanding observation made by Eisen is the fact that cancer of the stomach is associated with an anemia which is more severe than that accompanying cancer in any other portion of the gastro-intestinal tract. On the whole, the impression is given by this record that the degree of an anemia is dependent on the balance of many processes, among which hemorrhage and the impaired nutrition associated with gastric achylia or with obstruction in the gastro-intestinal tract play important rôles. The red cell counts and the hemoglobin estimations were higher in direct proportion to the duration of the disease. The age of the patient did not seem to have a specific

effect on the degree of the anemia. The cases of cancer of the esophagus showed no evidence of concentration of the blood serum. The most severe anemia was found associated with cancer of the stomach. In this disease the counts were particularly low in those cases in which hemorrhage was a marked clinical symptom; but the cases based apparently on an old ulcer history showed a red cell count above the average. The cases of cancer of the stomach associated with emaciation showed a low count, presumably due to impairment of digestion. Low counts were also usually found in cases in which the tumor, by its size or situation, caused obstruction. Adenocarcinoma seems to be associated with a more marked anemia than scirrhus or colloid cancer, probably because of its greater tendency to cause ulceration There is no apparent relationship between the extent of involvement and degree of dissemination and the grade of the anemia. Patients who had been subjected to operative intervention or radiotherapy did not present any definite alteration in the state of their anemia as a result of such treatment.

Miostagmin Test for Cancer.—In Green's opinion, the miostagmin reaction, within its limits and in expert hands, seems to be of the greatest help in incipient and obscure cases of malignant growths. The ricinolic-linolic antigen of Ascoli and Izar, in his hands, has proved less constant in its efficacy than the capronic acid antigen of Grevé. The miostagmin reaction is always negative in human sarcoma, while in mouse sarcoma, when synthetic antigens are used, it has not proved itself to be of any practical importance.

Inherited Microphthalmus.—Summing up the inheritance in microphthalmus, Macklin says that a condition which is diagnosed under that name may apparently be inherited either as a recessive, a dominant, or a sex-linked recessive condition. In any case, the person so affected should not reproduce, but the advice to be given to the brothers and sisters of the affected individual would depend on an investigation of the family history. Parents who have produced one microphthalmic child should not have any more offspring.

Colorado Medicine, Denver

24: 63-100 (March) 1927

Thymus Gland. E. Boyd, Minneapolis.—p. 66.
Diseases of Thyroid. G. B. Kent, Denver.—p. 68.
Medical Aspect of Goiter. T. D. Cunningham, Denver.—p. 73.
Surgery of Thyroid. J. E. Struthers, Denver.—p. 78.
Ambulatory Treatment of Fracture of Big Toe. H. I. Barnard, Denver. —p. 81.
Treatment of Diabetes Mellitus. C. F. Kemper, Denver.—p. 83.
Obesity. H. Gauss, Denver.—p. 88.

Florida Medical Association Journal, Jacksonville

13: 200-223 (March) 1927

Bronchial Asthma: Relation to Sinus Disease in Children. M. A. Lischkoff and J. H. Fellows, Pensacola.—p. 200.
Early Pulmonary Tuberculosis Roentgenologically Considered. H. O. Brown, Clearwater.—p. 204.
Case of Tetanus. W. H. Watters, Miami.—p. 207.
*Extragenital Chancre. C. F. Roche and T. B. Hall, Miami Beach.—p. 208.

Anal Chancre.—In the case reported by Roche and Hall, the chancre was situated on an external thrombotic hemorrhoid. The patient stated that he had been markedly constipated. The condition would not yield to the usual type of cathartics, so he conceived the idea of borrowing a douche bag from the room of one of the female employees of the hotel for the purpose of taking enemas.

Illinois Medical Journal, Oak Park

51: 169-252 (March) 1927

Diseases of Biliary Tracts. J. Brams, K. A. Meyer and W. A. Brams, Chicago.—p. 190.
Community Responsibility for Health Education. H. S. Cumming, Washington, D. C.—p. 194.
Esophagoscopy and Associated Problems. H. R. Watkins, Bloomington. —p. 199.
Surgical Treatment of Congenital Umbilical Hernia. H. P. Saunders, Chicago.—p. 204.
Erythremia with Low Hemoglobin. J. C. Redington, Galesburg.—p. 207.
*Diet Fads. J. H. Kellogg, Battle Creek, Mich.—p. 210.
*Hernia: Public Health Problem. E. Andrews, Chicago.—p. 216.
Surgical Indications in Fibroid Uteri. W. A. N. Dorland, Chicago.—p. 219.
Acute Perforations of Stomach and Duodenum. F. B. McCarty, Chicago. —p. 224.
What Shall Be Done with Prostatic? D. N. Eisendrath, Chicago.—p. 227.
Otologic Complications of Basal Skull Fracture. C. F. Yerger, Chicago. —p. 230.
*Traumatic Gumma: Relation to Compensation Insurance. J. P. Hahn, Galesburg.—p. 238.
*Mumps of Lacrimal Glands. J. E. Lebensohn, Chicago.—p. 241.
Fundus Occuli in Tryparsamide Treatment of General Paralysis of Insane. J. H. Roth, Kankakee.—p. 242.

Diet Fads.—Kellogg emphasizes that: 1. Dietetic fads may prove dangerous. Physiology, not fashion or empiricism, should guide physicians in prescribing foods as well as drugs. 2. Prolonged fasting is a drastic and dangerous procedure that is very rarely indicated. When undertaken, it should be under the care only of a qualified physician. 3. The popular fear of roughage is quite unfounded. Coarse foods rarely irritate the intestine; they only titillate. The bowels should be trained to evacuate residues and wastes three times a day, or after each meal. 4. The excessive use of cereals and other foods which leave an acid residue, especially meats and eggs, tends to disturb the chemical balance of the body, and thus may become a cause of widespread invalidism and inefficiency. The remedy is to be found in a freer use of milk, potatoes, fresh vegetables and fruits.

Hernia: Public Health Problem.—Andrews estimates that there are from four to six million sufferers from hernia in this country, and that 99 per cent of these can be restored to a normal state by proper care and without any mortality.

Traumatic Gumma and Compensation Insurance.—Hahn sees a connection between syphilis and a trauma which shows an indisposition to heal out of proportion to the extent of the injury. He is of the opinion that in some cases of ununited fractures in which the administration of thyroid has been beneficial, the success of the treatment may have resulted from the effect of the contained iodine on a coincidental condition of syphilis.

Mumps of Lacrimal Glands.—Lebensohn reports a case of mumps in which only the lacrimal glands were involved. As possible causes of this condition, influenza, rheumatism, gonorrhea, leukemia, smallpox, syphilis, tuberculosis and Mikulicz' diseases were considered and ruled out. The presumptive diagnosis was finally narrowed down to mumps.

Johns Hopkins Hospital Bulletin, Baltimore

40: 63-115 (Feb.) 1927

Skin Reactions to Human Serums. E. H. Chant and L. N. Gay, Baltimore.—p. 63.
*Combined Acrocephaly and Syndactylism in Mother and Daughter. A. A. Weech, Baltimore.—p. 73.
Sickle Cell Anemia. H. W. Josephs, Baltimore.—p. 77.
*Probable Presence of Increased Amounts of Guanidine in Blood of Patients with Arterial Hypertension. R. H. Major and C. J. Weber, Kansas City, Kan.—p. 85.
Rôle of Capillaries and Their Endothelium in Distribution of Colloidal Carbon by Blood Stream. R. M. Brickner, Baltimore.—p. 90.

Familial Acrocephaly and Syndactylism.—The deformities of the head, hands and feet of the mother, aged 19, and her daughter, aged 11 months, were almost identical in the cases reported by Weech. These two cases support the view expressed by Park and Powers that the combined malformations are evidences of germ plasm defects rather than the result of externally operating causes.

Guanidine in Blood in Arterial Hypertension.—The results of this series of observations made by Major and Weber agree with those of Pfiffner and Myers, that methyl guanidine, if present in the normal blood, is in amounts not exceeding 0.2 mg. per hundred cubic centimeters. Guanidine was present in the blood of twenty-one patients suffering from arterial hypertension, and in one patient with nephritis who did not have an elevation of blood pressure. Several patients with arterial hypertension have not shown an increase in blood "methyl guanidine." The authors do not yet know whether the substance which gives this increase in color in the blood of persons with hypertension is methyl guanidine or some other guanidine compound. These obser-

vations suggest, however, that the blood of certain patients suffering from arterial hypertension contains something which is present in greater amounts than in normal blood.

Journal of Bacteriology, Baltimore

13: 147-233 (March) 1927

Problems of Bacteriologist in His Relations to Medicine and Public Health. H. Zinsser, Boston.—p. 147.
*Relationship Between Surface Tension and Action of Disinfectants; Hexylresorcinol M. Frobisher, Jr., Baltimore.—p. 163.
Modification of Kligler Lead Acetate Medium. S. F. Bailey and G. R. Lacy, Pittsburgh.—p. 183.
Influence of Antiserum and of Animal Passage on Virulence and Electrophoresis of Pneumococci. M. A. Jacobson and I. S. Falk, Chicago.—p. 191.
Sugar as Source of Anaerobes Causing Explosion of Chocolate Candies. J. Weinzirl, Seattle.—p. 203.
Irregularities in Test for B. Coli in Water. R. E. Thompson.—p. 209.
Light Switch for Microscope. C. S. Mudge, Davis, Calif.—p. 223.
Anaerobiosis Produced by Means of Central Catalyzing Station. L. Boëz, Strasbourg, Germany.—p. 227.

Relation Between Surface Tension and Antiseptic Action.—Data are presented by Frobisher in support of the view that low surface tension plays an important rôle in disinfection. He says that the bactericidal powers of phenol (carbolic acid) and of hexylresorcinol against *Bacillus typhosus* may be enhanced by reducing the surface tension of their solutions by the addition of suitable quantities of sodium oleate or ethyl acetate. An excess of sodium oleate, when added to phenol or hexylresorcinol, inhibits the bactericidal action of the latter substances. The addition of small amounts (up to 3 per cent) of hexylresorcinol to at least one type of commercial hand soap is shown not to lend the soap additional power against *Bacillus typhosus* at 20 C. or 37 C. A direct relation exists between bactericidal power and ability to lower surface tension in two series of homologous resorcinol derivatives, including compounds ranging from resorcinol to dodecylresorcinol and dodecylylresorcinol, including both normal and isomeric compounds, and numbering nineteen substances in all.

Journal of Experimental Medicine, Baltimore

45: 399-570 (March 1) 1927

Experimental Bone Marrow Reactions: II. Normoblastosis Produced by India Ink: Influence of Pregnancy. G. L. Muller, Boston.—p. 399.
*Local Immunity in Experimental Erysipelas. H. L. Amoss and E. A. Bliss, Baltimore.—p. 411.
*Blood Fibrin in Upper Gastro-Intestinal Tract Obstruction. R. L. Haden and T. G. Orr, Kansas City, Kan.—p. 427.
*Excretion of Nitrogen After Upper Gastro-Intestinal Tract Obstruction. R. L. Haden and T. G. Orr, Kansas City, Kan.—p. 433.
*Etiology and Pathology of Oroya Fever: VI. H. Noguchi, New York.—p 437.
*Id.: VII. Response of Skin of Simians to Bartonella Bacilliformis. H. Noguchi, New York.—p. 455.
*Production of Wassermann Reagins by Means of Trypanosomes. K. Landsteiner and J. van der Scheer, New York.—p. 465.
*Influence of Light on Growth and Malignancy of Transplantable Neoplasm of Rabbit. L. Pearce and C. M. Van Allen, New York.—p. 483.
*Influence of Light on Reaction to Infection in Experimental Syphilis. W. H. Brown and L. Pearce, New York.—p. 497.
Infectious Granular Vaginitis of Cows. F. S. Jones and R. B. Little, Princeton, N. J.—p. 519.
Epidemiologic Studies on Respiratory Infections of Rabbit. IX. L. T. Webster, New York.—p. 529.
Id. X. D. T. Smith, Ray Brook, N. Y.—p. 553.
*Studies on Secretion of Pancreas. R. Elman and J. M. McCaughan, St. Louis.—p. 561.

Local Immunity in Experimental Erysipelas.—Evidence pointing to the production of a true local tissue immunity following local streptococcus infection has been reported. In the experiments reported by Amoss and Bliss, strains of hemolytic streptococci cultivated from the skin of patients with facial erysipelas have been employed. They show that not only the areas of skin actually involved in the reaction attending the immunization are refractory to subsequent injections, but that the field in the general direction of the lymph flow is likewise relatively resistant.

Blood Fibrin in Upper Intestinal Tract Obstruction.—Haden and Orr assert that after high gastro-intestinal tract obstruction, the blood fibrin increases rapidly. The change is more marked in animals with obstruction of the cardiac end of the stomach. The rise in fibrin parallels closely the toxemia characteristic of such conditions. These results indicate that liver insufficiency cannot be the cause of death in such obstructions.

Excretion of Nitrogen After Upper Intestinal Tract Obstruction.—After obstruction of the cardiac end of the stomach and after obstruction and release of the pylorus, Haden and Orr aver there is a marked increase in nonprotein nitrogen excretion. This increase is due to accelerated protein destruction, which may result from the great fluid loss, or to the action of some toxic body.

Etiology of Oroya Fever.—This report by Noguchi is based on the examination of fourteen monkeys that succumbed to severe infection with *Bartonella bacilliformis*. The pathologic changes observed in the organs were similar to those found in human organs in persons who died from Oroya fever.

Experimental Verruga.—The cutaneous lesions known as verruga nodular, verruga mular and verruga miliar have been reproduced in monkeys by Noguchi, by means of inoculation with *Bartonella bacilliformis*.

Wassermann Reaction with Trypanosomes.—The main result of the experiments described by Landsteiner and van der Scheer is that the serums of rabbits become strongly Wassermann positive on injections of dead trypanosomes. Flocculation reactions, according to Sachs-Georgi, corresponded to the complement fixation.

Effect of Light on Transplanted Neoplasm.—An experiment is reported by Pearce and Van Allen in which an environment of constant and continuous light, excluding the shorter ultraviolet rays, and one of constant darkness, have influenced the course and character of a malignant disease of rabbits induced by a transplantable neoplasm. Under the influence of constant light, the level of malignancy was observed to be low; under the influence of constant darkness, the level of malignancy was somewhat lower than in the control animals living under ordinary indoor light conditions, but the level was not as low as among the animals constantly illuminated. These observations furnish experimental evidence in support of the idea that there is a correlation between the external factor of light on the one hand, and the manifestations of an experimental malignant disease on the other.

Influence of Light on Experimental Syphilis.—A series of experiments was carried out by Brown and Pearce for the purpose of determining whether the reaction of rabbits inoculated with *Spirochaeta pallida* might be influenced by their light environment. The conditions compared were (1) diffuse sunlight filtered through window glass and subject to variations due to natural causes; (2) constant and continuous exposure to artificial light with a wave length of from 3,022 to 5,790 angstrom units (Cooper Hewitt), and (3) complete exclusion of light. The results showed clearly that each of these conditions produced a distinctive effect, and that the effect tended to conform to the nature of the environmental condition. In general, the efficiency of the reaction to infection increased with the amount of light received and with the constancy of the exposure.

Studies on Secretion of Pancreas.—By appropriate intubation of the main pancreatic duct of the dog, Elman and McCaughan have collected the total external secretion of the pancreas under sterile conditions. When all of the secretion is thus collected, exitus occurs in a characteristic way in about a week with anorexia, gastric irritability, vomiting and asthenia.

Journal of General Physiology, Baltimore

8: 509-726 (March 7) 1927. Jacques Loeb Memorial

Reactions of Cerianthus to Light. M. M. Moore, Naples.—p. 509.
*Metabolism of Tumors in Body. O. Warburg, F. Wind and E. Negelein, Berlin-Dahlem.—p. 519.
Aerobic and Anaerobic Metabolism of Carbohydrates. O. Meyerhof, Berlin-Dahlem.—p. 531.
Influence of Backward Reaction in Peptic Hydrolysis of Albumin. C. A. Morrell, H. Borsook and H. Wasteneys, Toronto.—p. 601.
Physical Chemistry of Proteins: VI. Activity Coefficients of Ions. E. J. Cohn and A. M. Prentiss, Boston.—p. 619.
Molecular Orientation in Living Matter. W. B. Hardy, Cambridge, England.—p. 641.

*Parts Played by Neural and Humoral Influences in Animal Reactions. E. Sharpey-Schafer, Edinburgh.—p. 645.
Chemist's Homage to Work of Biologist. H. E. Armstrong, London.—p. 653.
Orientation of Animals by Opposed Beams of Light. W. J. Crozier, Cambridge, England.—p. 671.
Applicability of Thermodynamics to Phenomena of Life. F. G. Donnan, London.—p. 685.
Relation of Age of Female to Crossing Over in Third Chromosome of Drosophila Melanogaster. C. B. Bridges, New York.—p. 689.
Gas and Electrolyte Equilibria in Blood: IX. A. B. Hastings, H. A. Salvesen, J. Sendroy, Jr., and D. D. Van Slyke, Baltimore.—p. 701.
*Epidemic Encephalitis and Simple Herpes. S. Flexner, Baltimore.—p. 713.

10: 469-622 (March 20) 1927

Effect of Certain Respiratory Inhibitors on Respiration of Chlorella. R. Emerson, Berlin-Dahlem.—p. 469.
Thermal Increments for Pulsation-Frequency in "Accessory Hearts" of Notonecta. W. J. Crozier and T. J. B. Stier, Cambridge, Mass.—p. 479.
Temperature and Frequency of Cardiac Contractions in Embryos of Limulus. W. J. Crozier and T. J. B. Stier, Cambridge, Mass.—p. 501.
Geotropic Orientation of Young Rats. W. J. Crozier and G. Pincus, Cambridge, Mass.—p. 519.
Geotropic Creeping of Young Rats. G. Pincus, Cambridge, Mass.—p. 525.
Potentiometric Studies on Intracellular *p*H Values of Single Fundulus Egg Cells. J. H. Bodine, Woods Hole, Mass.—p. 533.
Precise Measurement of Hemolysin. C. B. Coulter, New York.—p. 541.
Protein Associated with Hemolysin in Rabbit Serum and Plasma. C. B. Coulter, New York.—p. 545.
"Galvanotropism" of Roots. A. E. Navez, Cambridge, Mass.—p. 551.
Free Energy of Nitrogen Fixation by Living Forms. D. Burk, Berkeley, Calif.—p. 559.
Studies on Permeability of Membranes: I. Introduction and Diffusion of Ions Across Dried Collodion Membrane. L. Michaelis and W. A. Perlzweig, Woods Hole, Mass.—p. 575.
Phosphate Ion as Promoter Catalyst of Respiration. C. J. Lyon, Cambridge, Mass.—p. 599.
Arsenate as Catalyst of Oxidation. C. J. Lyon, Cambridge, Mass.—p. 617.

Metabolism of Tumors.—Warburg et al. discuss the question of whether tumor cells in living animals can be killed off through lack of energy, and the related question of how the tumors are supplied with oxygen and glucose in the body.

Control of Body Functions.—Sharpey-Schafer states that in the higher animals control of the functions of the body is dual, being partly neural and partly humoral. It is therefore inferred that in all cases in which a dual control exists, the neural, which is more rapid in its action, is primary, and the humoral, secondary; and that the object of the humoral influence is to continue and prolong the effect of the neural influence, and thus to effect an economy of nervous energy.

Herpes and Encephalitis Virus Not Identical.—Flexner explains the state of knowledge of the etiology of epidemic encephalitis, and draws a line of demarcation between the established virus of simple herpes and the hypothetic virus of epidemic encephalitis. He says that the experimental observations on rabbits do not suffice to prove the identity of the herpes with the encephalitis virus.

Jour. Pharmacol. & Exper. Therap., Baltimore

30: 351-427 (March) 1927

Effect of Atropine on Gastro-Intestinal Hemorrhage Produced by Witte's Peptone. E. G. Gross, New Haven, Conn.—p. 351.
Santonin Xanthopsia. W. Marshall, Aberdeen, Scotland.—p. 361.
Santonin Excretion and Santonin Xanthopsia. W. Marshall, Aberdeen, Scotland.—p. 389.
*Elimination of Iodine After Administration of Various Iodine Compounds. F. R. Greenbaum and G. W. Raiziss, Philadelphia.—p. 407.

Elimination of Iodine.—Greenbaum and Raiziss assert that iodides of the alkali metals, administered to animals in single massive doses by mouth, are eliminated in the urine almost quantitatively in a short period of time. The excretion of potassium iodide occurs within five to six days, and that of sodium iodide, in from three to four days. With both iodides, the greatest proportion of the iodine is excreted during the first twenty-four hours. After this period the daily elimination is very small. Potassium iodide seems to be eliminated by the kidney with greater difficulty than sodium iodide, and sometimes causes temporary retention of iodine in the body. Only traces of iodine were found in the feces. The results obtained for the elimination of calcium iodide were entirely different from those obtained with the iodides of the alkali metals. If it is administered by mouth, the major part, or at least 50 per cent of its iodine content, is eliminated in the urine, while the remainder is found in the feces. As in the case of the alkali iodides, the greater portion of the iodine of the calcium-iodide is eliminated during the first twenty-four hours.

Journal of Urology, Baltimore

17: 261-394 (March) 1927

*Coincidence of Renal Tuberculosis with Hydronephrosis. R. E. Cumming, Detroit.—p. 261.
*Value of Guinea-Pig Inoculations in Diagnosis of Renal Tuberculosis. H. D. Morse and W. F. Braasch, Rochester, Minn.—p. 287.
*Thrombosis and Thrombophlebitis of Renal Vein. P. W. Aschner, New York.—p. 309.
*Necrosis of Ureter: Perforation: Periureteral Abscess. N. P. Rathbun, New York.—p. 329.
*Telangiectasis of Kidney Simulating Renal Tumor. P. A. Jacobs and W. Rosenberg, Cleveland.—p. 337.
*Retroperitoneal Lymphoblastoma Simulating Kidney Neoplasm. C. P. Mathé, San Francisco.—p. 357.
*Use of Phenolsulphonphthalein Test. J. C. Negley, Los Angeles.—p. 367.
Bladder Decompression. M. F. Campbell, New York.—p. 371.
Congenital Hypertrophy of Verumontanum as Cause of Urinary Retention. W. W. Robinson, Chicago.—p. 381.
Tolson Punch Electrode. R. V. Day, Los Angeles.—p. 391.
Ureteral Dilator. G. R. Livermore, Memphis, Tenn.—p. 393.

Renal Tuberculosis with Hydronephrosis.—Hydronephrosis and renal tuberculosis occur simultaneously and in varied fashion. Nephrectomy can safely be accomplished in most cases, even if the remaining kidney is hydronephrotic, provided the infection in that kidney is controlled first and treated or cured after operation. Surgical treatment of renal tuberculosis, being accepted as the correct procedure whenever possible, is the proper therapeutic measure for tuberculosis in conjunction with hydronephrosis. Certain accessory methods of postoperative care, such as dietetic or physiotherapeutic, or the use of tuberculin, have proved of great value in the series of cases reported by Cumming.

Value of Guinea-Pig Inoculations in Diagnosis.—In eight of a series of forty-five cases of proved renal tuberculosis analyzed by Morse and Braasch, the guinea-pig reactions were negative. This discrepancy is explained by: (*a*) the inherent defensive mechanism of guinea-pigs, which varies according to the number and type of bacilli injected; (*b*) fibrosis and encapsulation of the infected area in the patient; (*c*) the appearance of *Bacillus tuberculosis* in showers, so that at intervals the urine may be free from it. In 109 cases of proved renal tuberculosis in which one kidney was apparently healthy, guinea-pig inoculation was positive in 18 per cent. The authors assert that the diagnosis of renal tuberculosis should not be decided from guinea-pig inoculation alone. Other laboratory or cystoscopic aids should be used to establish it. In order of importance these are urography, microscopic study of catheterized ureteral specimens, cystoscopic data, clinical data, and, particularly, examination of the genitalia. When the guinea-pig inoculation with urine obtained directly from the kidney is positive, and any of these data suggest a renal lesion, renal tuberculosis is the evident diagnosis. The data referred to may in themselves be sufficient to establish a diagnosis without the positive guinea-pig inoculation.

Thrombophlebitis of Renal Vein.—Aschner reports four cases of thrombophlebitis of the renal vein, two proved at necropsy and one proved by nephrectomy. The fourth, while absolute pathologic proof was lacking, was regarded as a probable case because of the clinical course. While there are not yet reliable diagnostic criteria, it is important for the surgeon to know that this grave complication of renal infection exists, that the kidney can act as a source for metastatic lesions, and that in dealing with the "surgical kidney" it is well to divide the vascular pedicle as far from the organ as is commensurate with safety. The pathologist should bear the condition in mind, for the renal vein frequently escapes adequate scrutiny, and perhaps a more careful study of surgical kidneys will reveal involvement of venous radicles in the parenchyma as a rational explanation of blood stream invasion in these cases.

Necrosis of Ureter.—The points of interest in Rathbun's case are the entire absence of any symptoms referable to the

urinary tract, in spite of the gross pathologic changes present, the rather unusual combination of lithiasis and tuberculosis with autonephrectomy; the sudden onset of symptoms simulating a ruptured ectopic pregnancy, and the very unique condition of necrosis of the ureter with periureteral abscess. The case, further, was of interest as an illustration of the merit of transfusion and two-stage operations in certain urologic cases.

Telangiectasia of Kidney.—In the case reported by Jacobs and Rosenberg, aside from the hematuria, there were no clinical evidences of the presence of telangiectasia. Hematuria was probably due to communications between the telangiectatic spaces and the calices, brought about by minute ulcerations through the pelvic membrane. It is the authors' opinion that telangiectasis of the kidney is not harmful to the patient and may not give symptoms. The parenchyma is not interfered with because of its presence. Symptoms can occur only as a result of direct or indirect trauma to the kidney area, or when some associated inflammatory process causes ulcerations into the telangiectatic spaces. It is then that hematuria presents itself. After a careful study of their case, they have come to the conclusion that the hematuria, which is practically the only symptom of telangiectasis of the kidney, is not sufficient reason for a nephrectomy. This is indicated only when the hematuria recurs and does not respond to the usual treatment, or when the hematuria is so severe as to cause an alarming anemia.

Retroperitoneal Lymphoblastoma.—The necropsy data in the case reported by Mathé verify the observations of clinicians and roentgenologists that deep roentgen-ray therapy may cause marked regression of neoplasms without necrosis. The beneficial effect of radiation depends on the stimulation of the normal tissue defense against cancer, and the changing of the balance between stroma and parenchyma.

Use of Phenolsulphonphthalein Test.—The following variation in the use of the phenolsulphonphthalein test has been tried out by Negley in more than a hundred cases. The bladder is washed with sterile water until solution returns clear, and is then filled to a comfortable tolerance with a 0.5 per cent solution of sodium bicarbonate. The bladder is inspected in the usual manner for any pathologic changes, and while the sodium bicarbonate solution is still in the bladder, 1 cc. of solution containing 6 mg. of phenolsulphonphthalein is injected intravenously; the catheterizing telescope, with catheters in position, is introduced; the ureters are visualized, and at the appearance of the phenolsulphonphthalein a deep pink color is noticed when the ureter ejects the urine. This pink spurt is noticed for size, as compared to the ureter opening, density of color (comparing the two sides), and strength of spurt, i. e., forcible or weak. These observations having been quickly determined, the catheters are introduced in the usual manner, and observation is made as to whether there is leakage of the dye alongside the catheters. Negley says that this test has many advantages but the technic is difficult to master.

Michigan St. Med. Society Journal, Grand Rapids

26: 77-144 (Feb.) 1927

Acute Pancreatitis. I. Abell, Louisville, Ky.—p. 77.
Adenomyoma or Endometrial Implants in Abdominal Wall. J. P. Pratt, Detroit.—p. 82.
Some Phases of Dystocia. L. E. Daniels, Detroit.—p. 85.
Pregnancy and Labor Following Gynecologic Operations. R. S. Siddall, Detroit.—p. 87.
Foreign Bodies in Eyeball. J. R. Rogers, Grand Rapids.—p. 90.
Laryngeal Cancer. A. C. Fürstenberg, Ann Arbor.—p. 94.
Liver Function Tests in Children. S. J. Levin, Ann Arbor.—p. 98.
Treatment of Fractures of Os Calcis. R. V. Funston, Detroit.—p. 102.
Last Illness and Death of George Washington. W. A. Wells, Washington, D. C.—p. 104.
Case of Pin in Appendix. H. M. Nelson, Detroit.—p. 119.
Ruptured Ventral Hernia. J. E. Watson, Detroit.—p. 120.

Minnesota Medicine, St. Paul

10: 65-140 (Feb.) 1927

Chronic Pancreatitis. J. B. Deaver, Philadelphia.—p. 65.
Shortcomings in Surgery of Cleft Lip and Palate. R. E. Farr, Minneapolis.—p. 70.
Surgery of Stomach. A. Schwyzer, St. Paul.—p. 77.
Endometrioma Involving Rectum. L. M. Miles, St. Paul.—p. 88.
Acute Intestinal Obstruction. J. F. Norman, Crookston.—p. 93.
Fatal Case of Tularemia in Minnesota. L. H. Rutledge, Detroit Lakes.—p. 97.
Epidemic Encephalitis. C. E. Riggs, St. Paul.—p. 100.
Surgery of Spleen. I. Sivertsen, Minneapolis.—p. 111.
Curriculum of Technical School: Medicine. E. P. Lyon, Minneapolis.—p. 116.
Therapy of Postencephalitic Parkinson Syndrome: Two Cases. C. E. Riggs, St. Paul.—p. 135.
Myositis Ossificans. H. T. Jones, Rochester.—p. 136.

New York State Journal of Medicine, New York

27: 277-334 (March 15) 1927

Relation of Medical Student to Cancer Problem. B. T. Simpson, Buffalo.—p. 277.
*Cesarean Section by New Method. G. L. Brodhead, E. G. Langrock and C. S. B. Cassasa, New York.—p. 281.
Brain Tumors. W. E. Dandy, Baltimore.—p. 285.
Dissociation: Rôle in Amnesia, Multiple Personality, Obsessions and Somnambulism. R. Kingman, New York.—p. 287.
Treatment of Hemorrhage in Peptic Ulcer. W. A. Bastedo, New York.—p. 290.
Newer Methods in Bronchoscopy and Esophagoscopy. M. E. Newman, Buffalo.—p. 294.
*Intracranial Hemorrhage in New-Born. W. Sharpe, New York.—p. 296.
Colle's Fracture. F. F. McGauley, Schenectady.—p. 299.
Evaluation of Icterus Index Test in Gastro-Enterology. E. W. Lipschutz, New York.—p. 301.

Cesarean Section.—The procedure described by Brodhead et al. is not an improvement on the classic cesarean section, but an operation to be done on those patients in whom a classic section would be fraught with the greatest dangers. The method was devised by Dr. Charles S. B. Cassasa, in 1916. The purpose of the operation is to secure a quadrilateral area on the anterior surface of the uterus, through which the baby may be extracted, and at the same time have this area excluded from the general peritoneal cavity. This quadrilateral area, 6 inches long and three-fourths of an inch wide, is obtained by suturing the peritoneum of the anterior abdominal wall to the peritoneum on the anterior surface of the uterus.

Intracranial Hemorrhage in New-Born Infants.—Fifty-nine acute cases of extensive intracranial hemorrhage in the newborn have been studied by Sharpe, and 671 chronic cases in children with varying degrees of spastic paralysis and mental retardations have been investigated. In selected children with a marked increase of the intracranial pressure, the diagnosis of a former intracranial hemorrhage, most probably occurring at the time of birth, was confirmed by operative and postmortem observations. Of 500 consecutive newborn babies on whom a routine spinal puncture was done within from twelve to twenty-four hours after birth, bloody and blood-tinged cerebrospinal fluid was obtained in forty-five. One other baby who died before a lumbar puncture was performed—the puncture being made fifteen minutes after death—revealed at necropsy an extensive intracranial hemorrhage with bloody spinal fluid. There were three deaths in this series of new-born babies on whom a lumbar puncture revealed blood in the cerebrospinal fluid—two in the first hundred and one in the fourth hundred. Postmortem examinations disclosed a large ventricular hemorrhage in the first, extensive supracortical hemorrhage and cerebral edema in the second, and large supracortical, basal, subtentorial and spinal hemorrhage in the third baby. Their common signs were stupor and refusal to nurse; convulsive twitches were present in only the third baby.

Northwest Medicine, Seattle

26: 125-180 (March) 1927

Treatment of Cancer. Relative Importance of Various Agencies Now in Use. R. C. Coffey, Portland, Ore.—p. 125.
Treatment of Cancer of Cervix by Radium. O. B. Wight, Portland, Ore.—p. 136.
*Cancer of Twenty-Five Years' Duration. H. H. Kretzler, Edmonds, Wash.—p. 138.
Recent Advances in Physiology. A. C. Ivy, Chicago.—p. 139.
*Obesity and Thinness: Specific Dynamic Action of Protein. E. H. Mason, Montreal.—p. 143.
*Disturbed Glucose Metabolism. C. H. Hofrichter, Seattle.—p. 146.
Chronic Ureteritis. H. W. Howard and M. LeCocq, Portland, Ore.—p. 154.
Stone in Ureter. J. Besson, Bend, Ore.—p. 157.
Pollakiuria. W. G. Schulte, Salt Lake City.—p. 159.

Congenital Dislocation of Hip. C. F. Eikenbary, Seattle.—p. 161.
Acute Appendicitis. J. F. Scott, Yakima, Wash.—p. 162.
Papillary Cyst Adenoma of Ovary at 13. J. L. Holzman, Portland, Ore. —p. 164.

Cancer of Twenty-Five Years' Duration.—Kretzler's patient first noticed a lump in her right breast, in 1901, at the age of 40. New Year's day, 1902, the breast was amputated because of a diagnosis of cancer. Fourteen years later, in 1916, growths recurred in the scar of the operation. Various forms of medical and quasimedical treatments were tried with little or no relief. When Kretzler first saw her in 1924, she was able to sit up in bed, was in a fair state of nutrition, and was fairly comfortable. There were extensive metastases in the left breast, in the axilla, downward toward the navel, and up along the right side of the neck. The lung showed evidence of marked involvement. She died in September, 1926, twenty-five years after the onset of the disease. Microscopic examination of tissue confirmed the diagnosis of carcinoma.

Obesity and Thinness.—A series of studies on the specific dynamic action of protein, reported by Mason, show that in so-called simple obesity the specific dynamic action of protein is much decreased (ten cases). In obesity of the hypophysial type there is also very little specific dynamic action for protein (five cases). In one case of "constitutional thinness" there is an increased specific dynamic action for protein.

Disturbed Glucose Metabolism.—His observations in disturbed glucose metabolism lead Hofrichter to feel that these disturbances are not permanently fixed changes, but constantly fluctuating abnormalities which may progress or improve, being rapidly influenced by acute infections, nervous reactions or pathologic changes. The etiology of disturbed glucose metabolism may be shared with that of (1) arteriosclerosis; (2) arthritis; (3) carcinoma; (4) acute and chronic infections, and (5) tuberculosis. The ability of the organism to metabolize glucose may be improved, either with a routine embodying diet alone, or by a combination of diet and insulin.

South Carolina Medical Association Journal, Greenville

23: 265-284 (Jan.) 1927

Cholecystography. W. M. Sheridan, Spartanburg.—p. 266.
Cerebral Spastic Paralysis from Orthopedic Side. W. A. Boyd, Columbia. —p. 268.
Ephedrine in Asthma and Allied Conditions. G. R. Wilkinson, Greenville.—p. 272.
Positive Immune Reaction in Smallpox Vaccination. W. C. O'Driscoll, Charleston.—p. 273.

Virginia Medical Monthly, Richmond

53: 761-820 (March) 1927

*Treatment of Spasmodic Torticollis by Root Section. C. C. Coleman, Richmond.—p. 761.
*Treatment of Mercuric Chloride Poisoning. C. C. Haskell, Richmond.—p. 765.
Heart Sounds; Interpretation. G. Nelson, Richmond.—p. 769.
Purpura of Urinary Tract. J. F. Geisinger, Richmond.—p. 772.
Reticulo-Endothelial System. Lymphocyte. H. E. Jordan, University.—p. 776.
Harelip and Cleft Palate. J. S. Horsley, Jr., Richmond.—p. 782.
Acute Upper Respiratory Infections. W. B. Blanton, Richmond.—p. 787.
Grain of Corn in Main Bronchus: Bronchoscopic Removal. E. G. Gill, Roanoke.—p. 792.
What's It All About? W. Clarkson, Petersburg.—p. 793.
Congenital Torticollis. P. C. Colonna, New York.—p. 794.
Minot-Murphy Diet in Treatment of Pernicious Anemia. E. L. Caudill, Narrows.—p. 796.
Radiologic Studies of Gallbladder. R. G. Waterhouse, Kinston, N. C. —p. 798.
Contacts in Public Health Work. R. K. Flannagan, Richmond.—p. 801.

Treatment of Spasmodic Torticollis.—In a case of intractable spasmodic torticollis, Coleman divided some of the lower spinal filaments of the accessory nerve. Spasm of the posterior muscles did not return after the operation, but there was some deviation of the chin to the left. The right accessory nerve was then resected, under local anesthesia, just proximal to its entrance into the sternomastoid muscle. Nine months after operation, the patient considers himself practically well.

Treatment of Mercuric Chloride Poisoning.—In Haskell's opinion, the various procedures that have been proposed for the treatment of mercuric chloride poisoning, when subjected to a critical test, are, with scarcely an exception, found wanting. One conclusion of a constructive nature may be drawn from the facts presented: the safest way to prevent death from mercuric chloride poisoning is to prevent absorption; and when the poison has been administered orally, this may be best accomplished by prompt and thorough gastric lavage. Haskell says that in the present state of knowledge, antidotes for mercuric chloride must be looked on as better fitted for affording mental solace to physicians and patients than as being capable of accomplishing a detoxication of the poison.

West Virginia Medical Journal, Charleston

23: 57-112 (Feb.) 1927

Periodic Health Examination of Apparent Healthy. O. S. Wightman, New York.—p. 57.
Quinidine: Digitalis Substitute? M. L. Bonar, Morgantown.—p. 61.
Acidosis in Children: Treatment. T. M. Barber, Charleston.—p. 65.
Management of Severe Diabetic. W. M. Sheppe, Wheeling.—p. 71.
Carcinoma of Esophagus. B. I. Golden, Elkins.—p. 77.
Injuries to Hand. A. G. Rutherford, Welch.—p. 83.
*Double Quinsy with Unusual Sequel. E. S. Dupuy, Beckley.—p. 87.
Treatment of Tetanus—Case Report. W. M. Sheppe and J. W. Marsh, Wheeling.—p. 87.

Cerebral Hemorrhage as Complication of Quinsy.—Dupuy reports a case of double quinsy in which the patient developed a cerebral hemorrhage, which involved the right side of his face, the right arm completely, and the right leg partially. He was semiconscious for two weeks, and was in bed two and one-half months. Three years later the patient presented a typical picture of a postapoplectic attack. He was able to work, but the mental symptoms, as well as the motor symptoms, remain about the same. The speech was of a peculiar hesitant and scanning character.

Wisconsin Medical Journal, Milwaukee

26: 129-186 (March) 1927

Biologic Considerations in Handling of Disease. A. T. Holbrook, Milwaukee.—p. 129.
Fractures: Individualization in Treatment. J. L. Yates, Milwaukee.—p. 134.
Backache. H. C. Schumm, Milwaukee.—p. 137.
Roentgen Ray in Diseases and Injuries of Skeleton. E. A. Smith, Milwauke.—p. 141.
*Hereditary Factor in Inguinal Hernia. J. T. Morrison, Madison.—p. 145.
Periodic Health Examination with Special Reference to Chest. K. E. Kassowitz, Wauwatosa.—p. 147.
Diagnostic Problems. L. M. Warfield, Milwaukee.—p. 151.
Multiple Serositis with Generalized Anasarca. J. A. Bigler, La Crosse, —p. 152.
Cardiospasm in Boy of Twelve. S. J. Seeger, Milwaukee.—p. 154.
*Fat Embolism. R. E. Burns, Madison.—p. 156.

Hereditary Factor in Inguinal Hernia.—The point of interest in the case of inguinal hernia reported by Morrison is the family history, which pointed toward an hereditary factor. The patient's father, and the father's brother had a "groin" hernia. In a family of eight children, five had inguinal hernias. Some of these were present from infancy, and some occurred later. In the patient's immediate family of four, three boys and one girl, there were two inguinal hernias. The patient's sister, who had an inguinal hernia, married a man who also had an inguinal hernia. Of this union, a family of four children all showed inguinal hernias. The patient stated that in the family, hernias were considered a common ailment. A truss was just as much an article of clothing as a dress or a suit.

Pulmonary Fat Embolism.—Burns' patient, aged 22, had a residual poliomyelitis. The acute illness, which had left both lower extremities badly paralyzed, had occurred at 8 years of age. The patient was very obese. She was unable to walk, even with assistance, because of muscular weakness, and marked flexion contracture at hips and knees, together with a partial subluxation at the knees and paralytic equinovarus. A manipulation of the feet under anesthesia was advised in order to correct deformity sufficiently that the patient could wear braces. As the result of this manipulation, symptoms developed within six hours that led to the diagnosis of pulmonary embolism. Recovery was complete in five days.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 313-362 (Feb. 19) 1927

Hunter's Ideal and Lister's Practice. B. Moynihan.—p. 313.
*Experimental Radium Arthritis and Articular Neoplasm. A. G. T. Fisher.—p. 319.
*Auriculoventricular Bundle in Bird's Heart. M. R. Drennan.—p. 321.
*Osteoperiosteal Graft in Dangle Foot. J. Gilmour.—p. 322.
Case of Artificial Pneumothorax. B. Hudson.—p. 323.
*Paraplegia (Megalocytic) Cured by Hydrochloric Acid. F. C. Eve.—p. 323.
*Habit Formation in Blood Vessels of Skin. P. B. Mumford.—p. 324.
Intermuscular Lipoma of Calf. J. J. Robb.—p. 325.
*Carcinoma of Heart. T. Lindsay.—p. 325.
Appendicular Colic Associated with Tuberculous Peritonitis Simulating Acute Appendicitis. G. Ralston.—p. 325.
Meningitis as Complication of Pregnancy: Two Cases. A. M. Macqueen.—p. 325.

Experimental Radium Arthritis.—Glass tubes containing radium were introduced by Fisher into the knee joints of rabbits, and well marked proliferation of the cartilage of the inner and upper margin of the trochlear surface of the femur resulted. The introduction of radium contained in platinum tubes resulted in an acute destructive suppurative arthritis of a fulminating type, which necessitated its destruction. In another rabbit, a condition of chronic arthritis of mixed type, or "rheumatoid arthritis," developed. In a third rabbit, a tumor developed from the lower end of the femur. Histologically, the tumor was clearly an ossifying periosteal sarcoma, which had originated from the periosteum covering the intra-articular portion of the diaphysis and the adjacent portion of the epiphysis of the internal femoral condyle.

Auriculoventricular Bundle in Bird's Heart.—Drennan dissected five ostrich hearts, and in each he found a system of fibers somewhat similar to the auriculoventricular bundle of the mammalian heart. The distribution of this system is such as to indicate that it has a similar function to the bundle of His—in short, that it constitutes a true avian auriculoventricular bundle.

Osteoperiosteal Graft in Dangle Foot.—Gilmour endorses this procedure and reports one case in which it was employed. He stresses the importance of accuracy in the process of embedding the grafts, and in not having the graft extend beyond the tibial epiphysis and gain an attachment over the epiphyseal cartilage to the diaphysis. This happened in his case. Clinically, there was good fixation at the ankle, but a mild degree of equinus deformity due to the freer growth of bone at the front of the tibial epiphyseal cartilage, the posterior region having been fixed down, as it were, by the binding pressure of the grafts.

Paraplegia Cured by Hydrochloric Acid.—In the case reported by Eve, diagnosis was possible by measuring the average diameter of the red cells, and by that alone. The patient was exhausted sexually. Hydrochloric acid was not present in the test meal secretions. The interpretation of the case is that, owing to the absence of hydrochloric acid, the intestines became infected with some germ which is capable either of producing the hemolysis of pernicious anemia or of causing the degenerative changes in the spinal cord. Probably the sexual exhaustion was a factor in deciding the incidence on the spinal cord. The patient was given half a pint of hydrochloric acid, three times a day, after food. Its strength was 5 drachms of dilute hydrochloric acid to the pint of sweetened water. He gradually improved, and eventually made a complete recovery.

Habit Formation in Blood Vessels.—According to Mumford a vessel, by the constant use of its power of contraction or dilatation, may acquire the habit of so responding to the same degree when the stimulus is lessened or when another form of stimulus is supplied. Hypersensitivity may remain in a skin vessel for a considerable period after the application of the original stimuli.

Carcinoma of Heart.—Lindsay records a case of primary squamous cell carcinoma of the wall of the left ventricle of the heart occurring in a woman, aged 77, who died from hypostatic pneumonia. The heart was not suspected, but at the postmortem examination a large white tumor, about the size of a hen's egg, was found in the anterior wall of the left ventricle. The whole of the alimentary tract was searched for a primary lesion, but none was found.

Glasgow Medical Journal

107: 65-128 (Feb.) 1927

Massage. R. C. Elmslie.—p. 65.
Tachycardia. G. A. Allan.—p. 74.
Social Aspects of Psychiatry. G. R. F. MacTavish.—p. 85.
Case of Paroxysmal Auricular Flutter, with 1-1 Ventricular Response: Effects of Digitalis and Quinidine. G. A. Allan.—p. 93.
Case of Pyrexia of Unknown Origin Associated with Cutaneous Eruption. R. A. Currie.—p. 95.

Journal of Mental Science, London

73: 1-194 (Jan.) 1927

Cause and Prevention of Neuroses. A. Adler.—p. 1.
*Prognosis in Schizophrenia. A. E. Strecker and G. F. Willey.—p. 9.
*Chronic Epidemic Encephalitis. P. K. McCowan and J. S. Harris.—p. 40.
Mental Exhaustion and Paranoid States. R. Thompson.—p. 51.
Endocrine Therapy and Psychoses. C. B. Molony.—p. 64.
Prison Psychoses. H. T. P. Young.—p. 80.
Child Murder and Insanity. J. S. Hopwood.—p. 95.
Wassermann Reaction in Blood Serum of Male Admissions to Hanwell Mental Hospital. G. A. Lilly and E. L. Hopkins.—p. 108.
*Calcium Content of Serum in Mental Invalids. E. Armstrong and W. Hood.—p. 111.

Prognosis in Schizophrenia.—Thirty-eight cases diagnosed as dementia praecox, but terminating in recovery, were analyzed by Strecker and Willey from the standpoint of potential prognostic indications occurring either before or during the attack of mental disease. The chief considerations were race, history, both familial and personal, personality, prepsychotic somatic state, precipitating situation, onset, and the psychic and physical phenomena of the psychosis itself.

Chronic Epidemic Encephalitis.—McCowan and Harris assert that scopolamine (hyoscine) has undoubted, though temporary, value in the parkinsonism of chronic encephalitis. Its action is a specific one; its value is objectively demonstrable, among other methods, by its effect on the blood sugar curve, which is made to approximate the normal curve. Its prolonged use does not lead to tolerance or any deleterious effects. Though in the majority of cases the full benefit of scopolamine can be obtained only by hypodermic administration, there is no doubt that in many cases considerable benefit follows its oral exhibition. It is undoubtedly much superior to belladonna or stramonium in the treatment of encephalitic parkinsonism.

Calcium Content of Serum of Mental Invalids.—The blood serum of 101 patients was examined by Armstrong and Hood. They found that the calcium content of blood serum in mental cases lies within normal limits, and that a high or a low content is not diagnostic of any specific condition.

Lancet, London

1: 423-472 (Feb. 26) 1927

*Surgery of Spinal Cord and Its Membranes. D. Armour.—p. 423.
Cardiospasm: Four Cases. J. Morley.—p. 431.
*Case of Severe Anemia of Pregnancy Simulating Addison's Anemia. T. J. Hoskin and E. Ceiriog-Cadle.—p. 433.
*Four Cases of Anthrax Treated with Sclavo's Serum. R. H. Boggon.—p. 435.
Case of Meckel's Diverticulum. C. S. McEuen.—p. 436.
*Lymphosarcoma of Nasopharynx Treated with Radium and Roentgen Rays. H. A. Colwell.—p. 437.
Case of Rupture of Enlarged Malarial Spleen. J. MacQueen.—p. 437.

Surgery of Spinal Cord; Use of Iodized Oil.—Regarding the use of iodized oil in the diagnosis and localization of spinal cord compression, Armour insists that it should in no way usurp the place of careful and repeated systematic clinical examinations of the patient, especially with reference to a sensory level, combined with laboratory tests of the cerebrospinal fluid. Recourse to it as a labor saving device and a short cut to diagnosis and localization is strongly deprecated. It should be used only after a subarachnoid block has been first demonstrated by the combined cistern-lumbar puncture method introduced by Ayer. It should not be used unless the possible dangers and complications are outweighed by the

more exact localization likely to be obtained. Finally, in properly selected cases, iodized oil is a definite aid in the study of spinal cord compression, which, if used intelligently, will increase definitely successful removal of spinal cord tumors at an earlier stage in the course of the disease, and thereby increase the percentage of cures and reduce the operative mortality.

Severe Pregnancy Anemia Simulating Addison's Anemia.—Hoskin and Ceiriog-Cadle record a case of severe anemia of the pernicious type associated with pregnancy. Following blood transfusion and the administration of dilute hydrochloric acid, the patient's general condition improved rapidly. The occurrence in this disease of severe anemia, high color index, and achlorhydria is said to associate it with Addison's anemia. The symptom of diarrhea with large pale stools, and the incidence of the disease in patients residing in hot climates, suggests an infection possibly of the same type as sprue. The predisposing factors are undoubtedly achlorhydria associated with general debility, prior to the onset of pregnancy.

Use of Sclavo's Serum in Anthrax.—The four cases of anthrax reported by Boggon are of interest, as they all were traced to the same source of infection—two elephants. All four men were employed in some connection with the animals. As the diagnosis in each of the cases was made early by the recognition of *Bacillus anthracis* in smears taken from the lesions, immediate serum treatment was undertaken; active surgery was not required. All the patients made uninterrupted recoveries with the exception of one who developed bronchopneumonia, following an attack of influenza. The method of treatment in all cases was subcutaneous injection into the loins or over the glutei of Sclavo's antianthrax serum.

Radiotherapy of Nasopharyngeal Lymphosarcoma.—Colwell's case seems worthy of record as one in which an extensive lymphosarcoma disappeared under radiation therapy, without operative procedure other than that necessary for the application of radium, and in which no recurrence has occurred during a period of more than six and a half years.

Royal Soc. of Trop. Med. & Hygiene Trans., London

20: 321-400 (Jan. 31) 1927

Tropical Neurasthenia. H. S. Stannus.—p. 327.
*Prickly Heat Etiology and Pathology. E. C. Smith.—p. 344.
*Is Bronchial Spirochetosis Distinct Clinical Entity? P. Manson-Bahr.—p. 352.
Short Hookworm Campaign in Pomeroon District, British Guiana. J. F. C. Haslam.—p. 354.
Colombian Relapsing Fever Simulating Acute Appendicitis. E. J. Pampana.—p. 357.
Malarial Fevers. IV. Complement Fixation Reaction. A. N. Kingsbury.—p. 359.
Thelazia Infection of Man and Mammals in China. E. C. Faust.—p. 365.
*Amebic Dysentery; Treatment. W. A. Young.—p. 370.
Exhibition of Stovarsol (Acetyloxyaminophenylarsinic Acid) in Treatment of Frambesia in Ashanti. P. S. Selwyn-Clarke.—p. 373.

Fungus as Cause of Prickly Heat.—A fungus showing yeastlike budding forms and branching mycelium has been demonstrated by Smith in the epidermal scales of persons affected with the condition known as prickly heat. Cultures of this fungus can be made from the scales which, when stained, appear as masses of budding yeastlike bodies (gram-positive). A few of the strains show short, scanty, mycelial elements. By inoculation of a culture on suitable soil (i. e., human skin), a lesion is obtained which is comparable to prickly heat in an aggravated form. The lesion produced shows a primary, vesiculopapular stage and a terminal desquamatory phase. A fungus, identical with that used for inoculation, can be demonstrated in the scales and obtained from them in culture. The fungus isolated from the experimentally produced lesion will, on reinoculation, give rise to a similar epidermal lesion. Sections of the experimental lesion show the presence of a yeastlike fungus in the horny epithelium, in the roofs of the vesicles or pustules, and in the superficial parts of the hair follicles. This fungus belongs apparently to the monilia group.

Bronchial Spirochetosis.—Manson-Bahr doubts the existence of bronchial spirochetosis. The demonstration of spirochetes in the sputum is without clinical significance, and its misinterpretation may lead to annoying, even serious, consequences.

Treatment of Amebic Dysentery.—It is suggested by Young that the administration of more than 1 grain (0.065 Gm.) of emetine daily for six days has an inhibitive effect on the production of what, for want of a better term, he has called the tissue-emetine-substance which kills *Endameba histolytica*. It is also suggested that better results will accrue by giving emetine every three or four days after the first 6 grains (0.4 Gm.), or better still, if a microscope is available, by administering 1 grain (0.065 Gm.) of emetine twelve hours before the multiplication of amebas is due.

Chinese Journal of Physiology, Peking

1: 1-96 (Jan.) 1927

Effect of Starvation and Refeeding on Intestinal Epithelium of Albino-Mouse. T. P. Sun.—p. 1.
Pharmacology of Chinese Aconite, T'sao-Wu-T'ou. H. P. Chu.—p. 7.
Bastard Anise Poisoning and Its Antidotal Measures. B. E. Read and P. C. Kiang.—p. 15.
*Anesthetic Mixtures of Ephedrine and Procaine with Epinephrine and Potassium Sulphate. B. E. Read and C. C. Lin.—p. 23.
Proteolytic Ferment of Hsiang-Kua, Cucumis Melo, Linn. (Cucurbitaceae). H. C. Hou and C. C. Chen.—p. 33.
*Method of Vessel Anastomosis for Viviperfusion, Cross Circulation and Transplantation. R. K. S. Lim.—p. 37.
*Secretion of Transplanted Stomach. R. K. S. Lim, C. T. Loo and A. C. Liu.—p. 51.
Method for Preparing Pure Ephedrine Hydrochloride from Ephedra Equisetina, Bge. C. T. Feng.—p. 63.
Method for Vividialysis. H. Necheles.—p. 69.
Denaturation of Proteins. II. Coagulation by Alcohol. H. Wu.—p. 81.
*Nutritive Value of Mung Bean, Phaseolus Aureus Roxb. E. Tso.—p. 89.

Anesthesia by Ephedrine, Epinephrine and Potassium Sulphate Mixture.—Read and Lin assert that a mixture of ephedrine with epinephrine and potassium sulphate can produce, by the wheal method, local anesthesia equal in intensity to that obtained by a mixture of similar proportions and strengths of procaine hydrochloride, epinephrine and potassium sulphate. The nature of this ephedrine anesthesia is not apparent, for simple solutions of this alkaloid do not produce wheal anesthesia. The synergism produced with epinephrine and potassium sulphate suggests a definite chemotherapeutic relationship between these three compounds. It is suggested that for dental surgery and ophthalmologic work, this mixture may prove of service.

Method of Vessel Anastomosis.—The method described by Lim depends on the use of aluminum couplers in bringing broad surfaces of the intima into contact in the union of blood vessels. The couplers differ considerably from the magnesium rings of Payr (4) and Jeger (2), but are not unlike the pattern that was devised by Lespinasse and Eisenhardt.

Secretion of Transplanted Stomach.—The results obtained by Lim et al. confirm the work of Ivy and Farrel, and also establish their conclusion that it affords a proof of a humoral mechanism in the causation of gastric secretion.

Nutritive Value of Mung Bean.—The mung bean constitutes an important part of the Chinese dietary. It is used in the form of flour, sprouts, "milk," protein curds, starchy vermicelli, or whole beans cooked in cereals, particularly rice. Feeding experiments made by Tso on white rats have shown that with the intake at about 18 per cent of the ration, and representing not less than 20 per cent of the total calories, the proteins of the Chinese mung bean are biologically complete. The mineral content of the mung bean is deficient chiefly in calcium and sodium chloride. The mung beans constituting 60 per cent of the diet furnish a moderate amount of vitamin A. At a 30 per cent level they are distinctly deficient in this vitamin. The mung beans are a good source of vitamin B. At the level of 30 per cent of the food mixture, they furnish sufficient vitamin B for the normal nutrition of rats.

Japanese Journal of Pharmacology, Kyoto

4: 1-15 (Jan. 20) 1927

Effect of Some Colloids on Development of Edema. N. Kitamura.—p. 1.
Combined Action of Cocaine Group and Potassium in Local Anesthesia. J. Kawabata.—p. 1.
Combined Action of Cocaine, Ammonia, Calcium, Strontium, Barium and Magnesium. J. Kawabata.—p. 2.
New Method of Study of Vessel Reaction. A. Ochiai.—p. 3.
Relationship Between Effect of Epinephrine and Site of Application. M. Ogawa.—p. 3.
Pharmacologic Reactions of Strips of Aorta of Rabbits. N. Kitamura.—p. 4.
Detoxication Action of Liver Against Cocaine. K. Kusaka.—p. 5.
Action of Cocaine on Liver and Thigh Vessels. K. Kusaka.—p. 5.
Experimental Studies on Intravenous Infusion of Ringer-Locke's Solution Containing Soluble Starch. S. Hori.—p. 6.
Experimental Studies on Subcutaneous Infusion of Hypertonic and Hypotonic Salt Solutions. S. Uyeda.—p. 7.
Pharmacology of Aristolochins. K. Ryo.—p. 8.
Pharmacology of Toad Poisons. I. Poison in Liver. K. Ryo.—p. 8.
Experimental Detoxication with Antagonists. S. Uchida.—p. 9.
Methemoglobin Formation: I. Effect of Gases, Acids, and Alkalis on Methemoglobin Formation by Pharmacals. C. Suzuki.—p. 10.
Id.: II. Methemoglobin Formation by Pharmacals in Vivo; Effect of Gases, Acids and Alkalis. C. Suzuki.—p. 10.
Physical and Pharmacologic Effects on Action of Curare. I. Temperature. S. Hori.—p. 11.
Id. II. Effect of Acids and Alkalies. S. Hori.—p. 12.
Pharmacologic Action of β-Indolethylamin. S. Hasegawa.—p. 12.
Effect of Narcotics on Cramps of Toxic Origin. E. Kobayashi.—p. 14.
Effect of Pharmacals on Conduction Between Auricle and Ventricle. G. Morita.—p. 14.

Oriental Journal of Diseases of Infants, Kyoto

2: 113-124 (Jan.) 1927

Vitamin-Content (Yeast Growth-Promoting Stimulus) of Mother's Milk Whose Infants are Suffering from Infant-Beriberi. T. Suzuki.—p. 113.
Subvestibular Temperature of Japanese Children. T. Fushiki.—p. 118.
Osmotic Pressure of Cerebrospinal Fluid. J. Kaneko.—p. 119.
*Effect of Ultraviolet Rays on Rabies Virus. K. Takaya.—p. 121.
Bacteriologic Studies on Diplococcus Pneumonia of Rabbits. Y. Uyetani and R. Sasaki.—p. 122.
*Diabetes in Child Treated with Insulin. S. Miyake.—p. 123.

Effect of Ultraviolet Rays on Rabies Virus.—On the basis of his experiments Takaya asserts that the ultraviolet ray does not have any effect on the virulence of rabies virus.

Diabetes in Child Treated with Insulin.—Miyake had under his care for one year a boy, aged 8 years and 11 months, who suffered from diabetes. Repeated injections of insulin had a most salutary effect. Small doses at long intervals are suggested as being preferable to large doses at short intervals.

Tohoku Journal of Experimental Medicine, Sendai, Japan

8: 237-354 (Feb. 9) 1927

Simultaneous Determination of Blood Sugar Content and Gas Content and Alkalinity of Arterial Blood During Carbon Monoxide Poisoning. S. Mikami.—p. 237.
Effect of Insulin on Carbon Dioxide Content in Arterial Blood and Blood Sugar Level in Rabbits Poisoned by Carbon Monoxide. S. Mikami.—p. 278.
Studies on Eel Serum. I. Pharmacology. Y. Mitomo.—p. 284.
Id. II. Serology. Y. Mitomo.—p. 312.
Id. III. Hemolytic Action of Brain. Y. Mitomo.—p. 324.
Heterogenetic Antigens and Antibodies; Horse's Urine. M. Yanagibashi.—p. 327.
*Detoxicating Hormone of Liver (Yakriton). III. A. Sato and H. Sakurada.—p. 347.
*Id. IV. Estimation of Rabbit-Ammonia-Unit. A. Sato.—p. 351.

Detoxicating Hormone of Liver.—A new method of testing the detoxicating liver function is described by Sato and Sakurada, which is to be applied to animals alone for the time being. The test classifies rabbits into more than six classes. The detoxicating experiments should be done with animals of equal detoxicating liver function.

Ammonia Unit of Liver Hormone.—The actual method of estimating the ammonia unit of the liver hormone with the use of animals of known detoxicating activity of the liver is described by Sato. Ten units of Yakriton (ten rabbit-ammonia-units) per kilogram of body weight will protect a rabbit of the detoxicating liver power of class b from any toxic effect of a fresh 3 per cent ammonium chloride solution, administered intraperitoneally five minutes later than the subcutaneous injection of Yakriton.

Bruxelles-Médical, Brussels

7: 173-207 (Dec. 5) 1926

Lateral Intracapsular Extraction of Cataract. Van Lint.—p. 173.
Surgery of the Spleen. R. Alessandri.—p. 177.
*Physiology of Human Amnion. H. Keiffer.—p. 180.

Physiology of Human Amnion.—Keiffer reports the details of his researches on the amnion in mammals. This membrane secretes the amniotic fluid, protoplasmic enclaves, glycerides and cholesterides. The latter agglutinate desquamated cells of the fetal epidermis, thus forming the vernix caseosa. It appears that the vernix, which is gradually resorbed by the fetal skin, serves for nutrition of the embryo. The author draws the conclusion that a substance analogous to the vernix may prove to be beneficial in the feeding of premature and debilitated infants. Tests in this field are now being made with wool fat.

7: 208-239 (Dec. 12) 1926

Vegetative Pyodermitis. J. Peyri.—p. 208.
*Magnesium Sulphate in Treatment of Eclampsia. J. L. Wodon.—p. 217.

Magnesium Sulphate in Treatment of Eclampsia.—Wodon obtained good results from magnesium sulphate in treatment of eclampsia. He advocates Lee Dorsett's method of intramuscular injections. From 3.5 to 4 Gm. of the salt, in a 10 to 50 per cent solution, is given in one injection. The injections are repeated according to the gravity of the case. By-effects have never been observed. Convulsions yielded to one injection; micturition increased, edemas disappeared rapidly. The uterine contractions remained unaffected. The treatment was without effect in uremic eclampsia. The action of intravenous injections is different. Here the mechanism of ions is an important factor. The magnesium ions take the place of calcium ions. This results in liberation of calcium in the blood. Consequently hypocalcemia, the probable cause of convulsions, is relieved.

Comptes Rendus de la Société de Biologie, Paris

96: 73-148 (Jan. 21) 1927. Partial Index

*Sugar in Intraperitoneal Exudates. X. Chahovitch and V. Arnovljevitch.—p. 75.
*Action of Ephedrine on Blood Pressure. A. Gradinesco and I. Marcu.—p. 77.
Experimental Scarlet Fever in Rabbits. P. Rosen et al.—p. 83.
*Intake of Food in Children and Adults. C. Richet, Jr.—p. 84.
*Carbohydrate Metabolism in Neoplastic Tissue. A. Blanchetière.—p. 94.
*Experimental Nephritis from Uranium. G. Auriat.—p. 111.
*Action of Roentgen Rays on Coagulation, Glycemia and Calcemia. E. Zunz and J. La Barre.—p. 125.
*Action of Roentgen Rays on Epinephrinemia. E. Zunz and J. La Barre.—p. 126.
*Regeneration of Blood Following Venesection. A. Van den Eeckhout and J. Lahaye.—p. 128.
*Filtrable Forms of Avian Tubercle Bacillus. F. De Potter.—p. 138.
*Cytozymes and Blood Coagulation. J. Bordet et al.—p. 141.

Sugar in Intraperitoneal Exudates Induced with Albuminoids.—Chahovitch and Arnovljevitch injected into the peritoneum of rabbits bouillon, peptone, casein or ovalbumin. The resulting intraperitoneal exudate contained sugar, the amount of which increased gradually up to the second hour after the injection. The exudate disappeared five or six hours later. Researches with the object of establishing the origin of the sugar and the mechanism of its accumulation in the exudate are in progress.

Action of Ephedrine on Blood Pressure.—In Gradinesco and Marcu's experiments, dogs were injected intravenously with ephedrine after which both suprarenals were removed. Suppression of epinephrine secretion interfered only partly with the stimulating influence of ephedrine on blood pressure. Evidently the action of ephedrine is not connected exclusively with the secretion of epinephrine.

Comparative Intake of Food in Children and Adults.—Richet's study was conducted on twelve children, aged from 4 to 15, belonging to various families. He determined the total weight of the food, its calorigenic power and the amount of proteins included in it. He concludes that, proportional to the body weight, a child eats twice as much as an adult.

Metabolism of Carbohydrates in Neoplastic Tissue.—Blanchetière determined the glycolysis in anaerobic and

aerobic cultures of neoplastic tissues by estimating their lactic acid content. In both cultures, glycolysis was greatly increased as compared with that in normal tissues. Nevertheless the amount of lactic acid did not correspond to that of the sugar that had disappeared. Apparently, in neoplastic tissues a part of the carbohydrates is transformed into other products, the nature of which is yet unknown.

Pathologic Anatomy of Nephritis Induced with Uranium.—A series of rabbits were injected with uranium. They developed acute or chronic nephritis without edema. Another series were given a sodium salt during the injections. Nephritis with edema occurred. Examination of the kidneys showed lesions of the epithelium in Henle's loops, especially in the ascending branches. Newly formed connective tissue was found in the kidneys of animals exposed to prolonged uranium poisoning. Various anatomicopathologic forms of nephritis could thus be induced, comparable to a certain extent to those in man. The experiments also showed that renal lesion is a necessary factor, but not the only one in the development of edema.

Influence of Roentgen Rays on Coagulation, Glycemia and Calcemia.—Zunz and La Barre examined the blood of rabbits before and after exposure of the splenic region to roentgen rays. It appeared that penetrating rays, which accelerate coagulation, also increase the content of calcium and of glucose in the blood. This is accompanied by rise in blood pressure. Further researches indicated that doses of roentgen rays enhancing coagulation cause an abnormally large secretion of epinephrine into the blood.

Regeneration of Blood After Venesection.—Van den Eeckhout and Lahaye observed that successive venesections were followed by a notable increase of red blood corpuscles in horses. Thus, after removal of 10 liters of blood, which represents almost half of the total blood of the animal, the number of the red blood corpuscles decreased only one seventh. The authors query whether the spleen alone is responsible for the polycythemia.

Filtrable Forms of Avian Tubercle Bacilli.—Fowls were inoculated with filtrates of avian tubercle bacilli of various concentrations. A series were injected with pure cultures; they died three months after the injection. On necropsy, typical lesions of generalized tuberculosis were found. Another series were injected with filtered emulsions; they did not develop any tuberculous lesions. It is presumed that the pathogenic property of the filtrates is attributable to special forms of avian tubercle bacilli, analogous to those in filtrates of human or bovine bacilli.

Cytozymes and Coagulation of the Blood.—Bordet, Renaux and Bordet conclude from their experiments that the coagulating property of cytozymes is the same in various animals. Consequently one may effectively replace another in regard to coagulation. Their difference consists in their serologic properties, since each is neutralized by a specific immune serum.

Presse Médicale, Paris

35: 241-256 (Feb. 23) 1927

*Action of Mineral Waters on Enzymes. M. Loeper et al.—p. 241.
Primary Syphilitic Jaundice. P. Nicaud.—p. 244.
Treatment of Tuberculosis with Methyl Extracts of Tubercle Bacilli. L. Nègre and A. Boquet.—p. 245.

The Zymosthenic Property of Mineral Waters.—Loeper, Mougeot and Aubertot's researches were made on mineral waters from various springs in France. Waters containing sodium bicarbonate, calcium or both were found to stimulate considerably the action of amylases originating in the salivary glands, liver or pancreas. This zymosthenic property is lacking in artificial solutions of sodium bicarbonate. The zymosthenic property does not depend on the radioactivity or on the hydrogen-ion concentration of the water. It is due to the metallic electrolytes in it. The rôle of bivalent metals in the zymosthenic action is important; that of heavy metals is accessory. Calcium appears to be especially active in this regard. The zymosthenic property of mineral waters explains their efficiency in nutritional disorders.

35: 257-272 (Feb. 26) 1927

*New Sign in Diseases of Pyramidal Tract. J. A. Sicard.—p. 257.
Errors and Perils of Freud's Theory. R. Cruchet.—p. 257.
*Consequences of Excessive Leukocytosis. A. Guieysse-Pellissier.—p. 259.
"Synthalin" in Treatment of Diabetes. M. Wolf.—p. 260.
Tuberculosis and Cancer from the Social Standpoint. E. Arnould.—p. 267.

Method for Detecting Reflexes of Pyramidal Origin.—Sicard suggests a new technic for obtaining reflexes in the lower limbs, characteristic for diseases of the pyramidal tract. While the patient's leg is held firmly with the hand, his foot is moved from side to side; never forward or backward. The movements must be brief and rapid, repeated for about thirty seconds. The reflex is more evident when the leg and the thigh are flexed. The sign is positive if there is extension of the great toe alone or of all the toes; extension of the great toe and flexion of other toes, backward flexion of the foot alone or associated flexion of the foot and of the leg. The sign was positive in several cases of spasmodic paraplegia of organic origin in which Babinski's reflex and that of Pierre Marie and Foix was negative. The sign was negative in healthy persons and in those with diseases of parapyramidal origin.

Consequences of Excessive Leukocytosis.—Guieysse-Pellissier emphasizes that in acute or chronic inflammations death can frequently be ascribed to excessive leukocytosis. Dogs were exposed to inhalations of arsin. Necropsy revealed only a few histologic lesions in the lungs. Nevertheless the lungs were filled with pus. Arsin causes a rapid afflux of leukocytes; their number is too great for the space in which they are contained. They are unable to obtain sufficient nutriment and die. Staphylococci and streptococci sometimes provoke an afflux of leukocytes exceeding that required for the defense of the organism. A large number of leukocytes is usual in certain persons of lymphatic constitution. Attempts should be made to discover measures for the regulation of leukocytosis in infectious diseases, as well as for the prevention of hypertrophy of the lymphoid organs.

Schweizerische medizinische Wochenschrift, Basel

57: 145-168 (Feb. 12) 1927

*Nervous Complications of Chickenpox, Smallpox and Vaccinia. E. Glanzmann.—p. 145.
"Neo-Unitarism." Tièche.—p. 154.
Percutaneous Gonococcus Infection of an Infant. A. Deuber.—p. 156.
Macrostoma. E. Forster.—p. 164.

Nervous Complications of Chickenpox, Smallpox and Vaccinia.—Glanzmann reviews the literature and his own cases. Serous meningitis, encephalitis and myelitis are the most important complications. They appear—at least in chickenpox and vaccinia—between the fifth and fifteenth day of the disease. He believes that the etiologic agents of the three diseases are related.

Pediatria, Naples

35: 169-224 (Feb. 15) 1927

*Blood Sugar in Typhoid. S. Barberi and A. Baudo.—p. 169.
Malignant Lymphogranuloma. G. Castorina.—p. 179.
Cerebral Complications of Whooping Cough. A. Berardi.—p. 188.
Technic of Blood Examination in Children. R. Vaglio.—p. 195.

Blood Sugar in Typhoid.—Barberi and Baudo found a normal concentration of blood sugar in children with typhoid. Injections of typhoid vaccine were followed by a very slight lowering and subsequent slight increase in blood sugar.

Policlinico, Rome

34: 235-270 (Feb. 14) 1927

*Treatment of Peritonitis with Colloidal Silver. S. Solieri.—p. 235.
Poisoning from Sardines. M. Pergola.—p. 237.

Treatment of Peritonitis with Colloidal Silver.—In 118 laparotomies for septic conditions, Solieri injected from 5 to 30 cc. of a solution of colloidal silver (as used for intravenous injections) into the peritoneal cavity. When used as a preventive (no free pus in the cavity) the mortality was 4 per cent among fifty cases. In diffuse purulent peritonitis the mortality was 20 per cent.

34: 53-104 (Feb. 15) 1927. Surgical Section

*Splenectomy in Malaria. L. Dominici.—p. 53.
Coxa Valga and Osteochondritis. E. Ettorre.—p. 58.
Sarcoma of Maxillary Sinus. L. Gobbi.—p. 68.
*Vesicorenal Reflux. G. Millul.—p. 74.
Aneurysm of Hepatic Artery. O. Tenani.—p. 92.

Splenectomy in Malaria.—Dominici removed the enlarged spleen (2,700 Gm.) in a patient with chronic malaria, who had developed considerable anemia, slight enlargement of the liver and slight jaundice (indirect reaction for bilirubin in the blood). The patient recovered completely.

Vesicorenal Reflux.—Millul believes that tuberculosis of the kidney is an important predisposing and determining cause of ureteral reflux.

Riforma Medica, Naples

43: 145-168 (Feb. 14) 1927

Adenoids. A. D. Cioppa.—p. 145.
Influenzal Bronchopneumonia and Thrombo-Arteritis of the Aorta. R. Menasci.—p. 149.
*Anaphylactogenic Potency of Asthmogenic Proteins. V. Pennati and A. Tolomei.—p. 151.
Vomiting in Infants. R. Fuà.—p. 153.
Acute Ulcers of the Vulva. A. V. Ferrari.—p. 164.

Anaphylactogenic Potency of Asthmogenic Proteins.—Pennati and Tolomei did not obtain the Arthus phenomenon nor an anaphylactic shock in guinea-pigs from repeated injections of extracts of pollen and horse dander. They point out that these results do not disprove the probability of the anaphylactic nature of asthma.

Archives de la Sociedad Médica de Valparaíso

1: 119-206 (Nov. and Dec.) 1926. Partial Index

Value of the Wassermann Test. G. Münnich.—p. 119.
Heart with Two Cavities. O. Wildner.—p. 125.
Endocarditis Lenta. C. Schwarzenberg.—p. 127.
Multiple Fecal Fistulas of the Cecum. H. Grove et al.—p. 130.
*Extragenital Chancroid. H. Vera.—p. 132.

Extragenital Chancroid.—In a patient, 63 years old, a persistent lesion of the leg had been diagnosed as furunculosis and ulcer. As the picture resembled chancroid, Vera examined the pus and found an abundance of typical Ducrey-Unna bacilli. Under treatment for chancroid immediate improvement took place. Instruments or the hands may have caused an accidental infection.

Boletín del Instituto de Med. Exper., Buenos Aires

2: 771-1096 (Nov.) 1926. Partial Index

Action of Roentgen Rays on Cultures of Tumor Tissue in Vitro. A. H. Roffo.—p. 771.
Erythroplasia of the Glans. A. H. Roffo.—p. 787.
Influence of Autolysates on Tissue Growth in Vitro. A. H. Roffo.—p. 797.
Toxic Action of Chicken Tumors and Organs. A. H. Roffo and R. L. Ramirez.—p. 877.
Skin and Gland Blastomycosis. M. Aberastury.—p. 885.
Biologic Action of Roentgen Rays. N. Capizzano.—p. 922.
Radium Emanation in Water. E. Jonquières.—p. 929.
*Surgery in Cancer of the Penis. A. Astraldi.—p. 933.
*Blood Changes Caused by Rubidium. A. H. Roffo and H. De Giorgi.—p. 955.
Toxicity of Tumors in Different Structures. A. H. Roffo and E. García Velloso.—p. 973.
*Roffo's Test in Cancer of the Genital Organs. F. Carranza.—p. 984.
Experimental Carcinoma of the Spleen. A. H. Roffo and A. Encina.—p. 1009.

Surgical Treatment of Cancer of the Penis.—While gland enlargement is rather common in penial cancer, Astraldi prefers not to touch the glands in partial or total amputation. His series includes twenty-two cases. In the only case in which he attempted gland dissection, recurrence took place eight years later. Advocates of gland removal in cancer of the penis fail to apply the same principle to superficial growths on the face. In the Institute of Experimental Medicine no time is wasted on radiotherapy in such cases, but surgery is resorted to at once.

Changes in the Blood Caused by Rubidium.—Roffo and De Giorgi studied the effects of rubidium on thirty-three patients with different types of cancer. Both rubidium chloride and rubidium seleniate caused a slight decrease in the p_H of the blood. The superficial blood pressure also became lower. The action was proportional to the dose used.

Roffo's Test in Cancer of the Genital Organs.—Roffo's method proved positive in 80 per cent of 117 cases tested by Carranza. While the reaction is not specific, it may confirm the diagnosis in doubtful cases.

Lisboa Médica, Lisbon

3: 445-532 (Oct.) 1926

*Treatment of Bone Sarcoma. F. Gentil.—p. 445.
Generalized Osteitis Fibrosa in Adolescents. H. Parreira and L. de Castro Freire.—p. 465.

Conservative Treatment of Bone Sarcoma.—In his first case of bone sarcoma twenty-four years ago, Gentil contented himself with removing the seat of the tumor, the head of the left humerus. The patient remained well for more than five years. Her son, a child less than 2 years old, had a large abdominal sarcoma. In another case of tibial sarcoma, after resecting the bone, a pedunculated bone graft was inserted. The patient has remained well for twenty years. Among 7,083 admissions to one of the Lisbon surgical clinics, 1,508 were for malignant tumors; only twenty-eight of these were bone sarcomas. Including the first two cases, the total number reaches thirty, with eight cures, i. e., 26.6 per cent. If the tumor is separated from the soft parts by periosteum, excision may be tried, followed by roentgen rays or radium and a bone graft. The benignity of giant cell tumor, which made up part of this series, permits almost any measure to be tried. The roentgen rays not only locate the tumor, but show whether it belongs to the giant cell variety. In anatomically inoperable sarcomas as well as those composed of small round or spindle cells, the treatment should be radium followed, where possible, by surgery.

Revista Médica del Uruguay, Montevideo

30: 1-57 (Jan.) 1927

Oscillating Polycythemia. J. B. Morelli and J. N. Quagliotti.—p. 1.
*Pneumonia in Children. L. Morquio.—p. 8.
Physical Therapy in Pediatrics. V. Escardó y Anaya.—p. 30.

Pneumonia in Children.—In the Montevideo foundling asylum, among over 20,000 infants, Morquio found only three cases of pneumonia in children from 25 days to 9 months old, and only seven cases in children less than 2 years of age. Among 591 cases of pneumonia in children (1916-1925), the age varied from 1 year (three) to 14 or 15 years (twenty-six), but the majority were from 6 to 9 years old. Boys predominated. The right lung was involved as follows: apex, 154; middle, eighty-five; base, twenty times; the left lung, apex, forty-eight; base, 210 times. In twenty-six cases the pneumonia was double. The stay in the hospital averaged eight days; minimum, one day (two patients); maximum, more than twenty days (thirty-eight). Complications, such as congestion, bronchopneumonia, mumps, otitis or pleurisy, developed in 146 cases. Two cases that started as caseous pneumonia proved to be tuberculosis. Both patients died. In other cases the pneumonia was superposed on ganglio-pulmonary tuberculosis. Pneumonia may either leave the tuberculous process alone or cause a flare-up or aggravation. The death rate was 3.3 per cent. Treatment must be as simple as possible, discarding everything unnecessary and troublesome. The result of vaccines and serums is still problematical.

Revista de la Soc. de Med. Interna, etc., Buenos Aires

2: 547-710 (Dec.) 1926

Iodine in the Treatment of Exophthalmic Goiter. M. R. Castex and M. Schteingart.—p. 549.
The Heart in Hyperthyroidism. P. Escudero and F. Puchulú.—p. 557.
Remineralization in Tuberculosis. C. Robertson Lavalle.—p. 583.
Syphiloma of the Liver and Obliteration of the Vena Cava. J. J. Spangenberg and L. Munist.—p. 588.
Pseudocavitary Syndrome from Deviation of the Trachea in Chronic Pulmonary Tuberculosis. J. Palacio and M. Calvo.—p. 601.
Weber's Alternating Hemiplegia with Hemianopia. C. Bonorino Udaondo and C. Pinedo.—p. 610.
Castellani's Bronchial Spirochetosis. J. J. Vitón et al.—p. 617.
*Histamine in the Study of Gastric Secretion. C. Bonorino Udaondo and L. V. Sanguinetti.—p. 628.

Abscess of the Liver. G. Segura.—p. 636.
Amebic Infection of the Lung. R. Novaro and J. Bacigalupo.—p. 653.
Permanent Subcutaneous Drainage in Tuberculous Meningitis. M. R. Castex et al.—p. 661.
*Thoracic Bandaging After Labor in Tuberculosis. A. A. Raimondi et al. —p. 672.
Diagnosis of Tuberculosis of the Eye. J. Lijo Pavia.—p. 695.

Histamine in the Study of Gastric Secretion.—The use of histamine, according to Bonorino and Sanguinetti, offers advantages in the study of the secretory function of the stomach. Its disadvantage lies in its congestive tendency. Hence it should not be used in cases of gastric hemorrhage. The series included eighteen normal subjects and six patients with ulcer or cancer.

Thoracic Bandaging After Labor in Tuberculosis.—Among eighty tuberculous patients in whom Raimondi and his associates tried thoracic compression after labor, sixty-five were benefited. The other fifteen presented tuberculosis with laryngeal complications on admission, and the bandages did not prevent puerperal fever and death. In some cases, Sergent's small double pneumothorax may be tried immediately after labor, but in others this is not feasible.

Archiv für Dermatologie und Syphilis, Berlin

152: 273-528 (Dec. 3) 1926

*Circumscribed Connective Tissue Skin Changes. O. Sachs.—p. 273.
*Experiments in Idiosyncratic Hypersensitiveness. B. Bloch and A. Steiner-Wourlisch.—p. 283.
*Respiratory Metabolism in Skin Diseases. E. Urbach.—p. 304.
Congenital Lymphangioma. M. Wortberg.—p. 329.
Scleroderma and Calcification of the Skin. J. Pernet.—p. 337.
Treatment of Lupus Erythematodes by Ionthophoresis. S. E. Sladkowitsch.—p. 353.
Ordinary Fungi and the Human Skin. U. Niethe.—p. 358.
Zosteriform Xanthoma. C. Kreibich.—p. 365.
Lentigines. H. W. Siemens.—p. 372.
*Biochemistry of Tuberculosis of the Skin. N. Melczer.—p. 381.
Tumefaction of the Skin of the Frog. A. M. Memmesheimer.—p. 385.
*Experimental Connective Tissue Tumors. N. Melczer.—p. 398.
Keratoma of Hand and Foot. A. Brauer.—p. 404.
Erythrodermia Leucaemica. E. Pick.—p. 415.
Skin Pigment and Blood Tyrosin. D. Steiger-Kazal.—p. 420.
Dermatomycosis. G. Falchi.—p. 427.
The Blood Picture in Leprosy. P. Bargehr.—p. 462.
Pathogenesis of Skin Tuberculosis. E. Bruusgaard.—pp. 465 and 482.
Verruca Senilis und Keratoma Senile. W. Freudenthal.—p. 505.

Connective Tissue Nevi.—Sachs describes two cases with illustrations and photomicrographs in colors. The lesions belonged to the hyperplastic variety and consisted of connective tissue and smooth muscle fibers. The most important changes were in the papillary layer.

The Question of Idiosyncrasy.—Bloch and Steiner-Wourlisch studied the idiosyncrasy problem on the human subject with preparations of the leaf of the primrose. With preparations containing the antigen in strong concentration, it was possible to sensitize all the persons tested (twelve). With weaker concentrations about 40 per cent (ten out of twenty-four) were sensitized. The sensitization obtained proved lasting. Clinically and histologically it was similar to "spontaneous" idiosyncrasy.

Basal Metabolism in Skin Diseases.—The basal metabolic rate was investigated in 235 cases of various dermatoses. It was found to be raised in hyperhidrosis (frequently), in thirteen of thirty-five cases of psoriasis, in 33 per cent of cases of acne vulgaris (it was lowered in 17 per cent), in 50 per cent of all cases on a vasoneurotic basis (it was lowered in 16 per cent), in one of six cases of scleroderma (in two it was lowered), and in 40 per cent of cases of pruritus associated with the menopause. It was normal in practically all cases of rosacea, of atrophic acrodermatitis and of alopecia areata.

Phenolase and Diastase Content of Tuberculosis of the Skin.—Melczer found that the tissue of lupus and of tuberculosis verrucosa cutis contains about the same amount of diastase as does normal skin, but about eight times more phenolase than the normally pigmented skin of the leg.

Experimental Production of Connective Tissue Tumors.—Malignant connective tissue tumors developed in about 17 per cent of the albino rats that Melczer treated with tar. Histologically the tumors corresponded to alveolar sarcoma. Autotransplantation and homeotransplantation were successful. From 5 to 7 per cent of the tumors caused pulmonary metastases, which were likewise homeotransplantable. The virulence of the transplants diminished after from two to five passages, so that, finally, spontaneous healing took place.

Archiv für exp. Pathologie und Pharmak., Leipzig

120: 1-128 (Jan.) 1927

*Metamorphosis of Axolotl Fed on Thyroid. A. Nagel.—p. 1.
*Influence of Liver Extirpation on Cholesterol Metabolism. E. Enderlen et al.—p. 16.
Action of Mixed Drugs. S. Loewe et al.—p. 25.
Idem. S. Loewe.—p. 41.
The Hormone Content of Corpus Luteum Preparations. S. Loewe and F. Lange.—p. 48.
Active Substances in Urginea Burkei. J. M. Watt.—p. 65.
Electric Stimulation of the Surviving Intestine of the Rabbit. F. P. Leusden and O. Riesser.—p. 77.
Local Anesthetics and Antipyretics of the Thiophen Series. H. Steidle. —p. 100.
*Inhibitory Effect of Pituitary Preparations on Exudation. L. T. Poulsson.—p. 120.
Detoxication of Pentamethylentetrazol in the Liver. C. Ridder.—p. 126.

Metamorphosis of Axolotl Fed with Thyroid.—On axolotles (amblyostoma) Nagel studied the influence of thyroid preparations on carbon dioxide production, the relation between body weight and water metabolism and skeletal changes as seen in the roentgenogram. The metabolism increased by as much as from 35 to 40 per cent. The body weight decreased and there were skeletal changes in the head.

Extirpation of the Liver and Cholesterol Metabolism.—In experiments on dogs, Enderlen, Thannhauser and Jenke found that extirpation of the liver was followed by increase in the total cholesterol content of the organism, especially in the cholesterol esters in the blood.

Inhibiting Action of Pituitary Extracts on Exudation.—In experiments on rabbits Poulsson found that pituitary preparations had a marked inhibitory action on mustard oil chemosis or edema due to paraphenylendiamin. The result depended on the contracting effect of the preparation on the capillaries.

Archiv für klinische Chirurgie, Berlin

143: 533-808 (Dec. 29) 1926

*Treatment of General Peritonitis of Appendiceal Origin. K. Reschke.—p. 533.
Mortality of Operation for Subtentorial Tumors. W. Lehmann.—p. 552.
*Experiments in Innervation of Vessels. G. Magnus.—p. 574.
Gold Treatment of Surgical Tuberculosis. H. Achelis.—p. 582.
Tumors of the Parotid. F. Stöhr and E. Risak.—p. 609.
*Experiments in Prevention of Postoperative Peptic Ulcer. A. Winkelbauer.—p. 649.
*Effect of Roentgen Rays on Acid-Base Equilibrium. G. von Pannewitz. —p. 697.
Tumors of the Mesentery in the Pathogenesis of Occlusion of the Small Intestine. W. J. Mirer.—p. 710.
Hepatobronchial Fistulas of Echinococcus Origin. B. Ljubarsky.—p. 718.
Clinical Study of Goiter Heart. E. Gmelin.—p. 726.
Pseudarthrosis and Muscle. A. Buresch.—p. 739.
Carcinoma and Carcinoid of the Appendix. H. Vollmar.—p. 763.
Cholecystography. H. Friedrich and E. Pflaumer.—p. 769.
Thrombosis of Renal Vein Simulating Tumor. P. Biernath.—p. 802.

Treatment of General Peritonitis Originating in the Appendix.—Reschke reviews the results of treatment of late cases of general peritonitis of appendicitic origin in the Greifswald university clinic since 1903. Of sixty-five patients brought in on the fourth day, or later, fifty were operated on, with a mortality of 92 per cent; fifteen were treated conservatively, with a mortality of 53 per cent. Of patients brought in on the third day, the mortality was more nearly equal, 48 and 50 per cent, respectively, for those given surgical treatment and those given conservative treatment. In all cases, so far as could be judged, the process had extended over the entire abdominal cavity.

Experiments in Innervation of Vessels.—In a region excluded from the circulation by application of an Esmarch bandage, the capillaries contract in response to mechanical stimulation. Magnus endeavored to discover on what path this reflex could be interrupted. He found that the reflex was inhibited by experimentally induced local anesthesia and by old, sensory paralysis, but not by periarterial sympathectomy. The arc, therefore, does not run through the plexus

surrounding the artery, and the experiments fail to give a theoretic support to Leriche's method.

Prevention of Postoperative Peptic Ulcer.—From experiments on dogs Winkelbauer states that postoperative jejunal ulcers cannot be produced by mere acidification of the more distal segments of the intestine. The segment of duodenum below Vater's papilla is more resistant to ulcer formation than the upper portion, and if it is used in the anastomosis ulcer is less likely to result. Ulcers can be avoided, even after experimental operations that regularly produce them, if the musculature of the intestinal wall is removed, as Kreidl proposed.

Effect of Roentgen Irradiation on Acid-Base Equilibrium.—The reaction presents two phases, the first acidotic, the second alkalotic. After irradiation of the stomach, the second phase is most prominent. After irradiation of the liver, the first phase is exaggerated and the second does not take place. Since roentgen sickness occurs always during the alkalotic phase, it is absent or slight after irradiation of the liver. The acidotic phase is the direct result of the irradiation, while the alkalotic phase is brought about by stimulation of the vagus by decomposition products. Accordingly, a causal treatment or prophylaxis of roentgen sickness would be based on tranquilizing the vagus or stimulating the sympathetic. Good results have been achieved with lobelin. In view of the acidosis (without a subsequent alkalotic phase) that follows irradiation of the liver, it appears unwise to treat that organ with roentgen rays within a few days before ether or chloroform anesthesia.

Archiv für Ophthalmologie, Berlin

118: 1-194 (Jan. 12) 1927

*Blood Reaction in Glaucoma. H. Schmelzer.—p. 1.
Congenital Hydrophthalmus. P. A. Jaensch.—p. 21.
Nystagmus. Ohm.—p. 103.
Comparative Determinations of Blood Pressure in Vessels of the Eye. M. Baurmann.—p. 118.
*Origin of Xanthosis of the Eyeball. W. Rohrschneider.—p. 131.
Argyrosis of the Cornea. B. Larsen.—p. 145.
Anomaly of the Skin with Lipodermoid of the Conjunctival Bulb. H. W. Kranz.—p. 167.
Roentgen-Ray Localization in the Eyeball. W. Comberg.—p. 175.

Blood Reaction in Patients Suffering from Glaucoma.—On determining the p_H and carbon dioxide capacity of thirty-nine samples of blood plasma from thirty-four patients with chronic and from three with acute glaucoma, Schmelzer did not find any relation between the blood reaction and glaucoma.

Origination of Xanthosis of the Eyeball.—Rohrschneider injected streptococci suspended in physiologic salt solution into the anterior chamber of the left eye of rabbits, after removal of the aqueous humor. Yellow discoloration developed in the anterior part of the eyeball. Microscopic examination of sections of the eye revealed lipoid deposits, containing cholesterol esters. The fatty degeneration of the eyeball is not considered an infiltrative process, but should be explained on the basis of local intraocular processes. The lipoids were probably produced by fatty decomposition of infectious exudates. The microscopic and macroscopic features of the pathologic process in the experiment closely resembled the changes in the human eye known as xanthosis of the eyeball.

Archiv f. Schiffs- u. Tropen-Hygiene, etc., Leipzig

31: 1-52 (Jan.) 1927

*Syphilis in the Dutch East Indies. E. H. Hermans.—p. 2.
The Diseases of Ecuador. A. J. Valenzuela.—p. 13.
*Leprosy in Palestine. T. Canaan.—p. 20.
Leishmaniasis in Samarkand. A. S. Artamonoff.—p. 32.
Piroplasmosis in Monkeys. W. Kikuth.—p. 37.
Elephantiasis, Uncinariasis and Syphilitic Ulcers in Santo Domingo. C. T. Georg.—p. 41.
Ornithodorus in the Auditory Meatus. O. Beselin.—p. 44.
Ornithodorus in Man in South Africa. J. N. W. Loubser.—p. 45.

Syphilis in the Dutch East Indies.—Hermans' studies indicate that syphilis in the Javanese runs a more favorable course than in Europeans. The skin and the organs of mesodermal origin are more seriously affected in the Javanese than in Europeans, but congenital syphilis, metasyphilitic diseases and syphilis of the internal organs are rare.

Leprosy in Palestine.—Canaan's material consists of 261 patients. The best results were obtained by chaulmoogra oil treatment. Daily doses of from 15 to 20 cc. of the oil were given by mouth and were combined with intramuscular injections of the ethyl esters of chaulmoogra or hydnocorpus oils. A period of treatment of from three to four months was usually followed by a rest period of from four to six weeks. The patients reacted with leprosy fever, which, prognostically, is considered a favorable sign. The bacilli usually disappeared during the first month of treatment. Many of the tubercles vanished and those remaining decreased in size. Ulcerations of the mucous membrane healed completely. The general and nutritive condition improved.

Beiträge zur klinischen Chirurgie, Berlin

138: 193-390, 1926

Congenital Anomalies Causing Intestinal Occlusion. K. W. Bender.—p. 193.
*Calcification and Ossification of Muscle and Lime Metastases in the Kidneys Following Transverse Lesions of the Spinal Cord. P. Meyer. p. 233.
True Adenoma of the Umbilicus. V. Föderl.—p. 255.
*Furuncle Metastases. H. Kauffmann.—p. 276.
Renal Calculus of Unusual Form and Origin. W. Arnold.—p. 288.
Experimental Free Transplantation. V. Kuzma and E. Gold.—p. 295.
Histology of Pseudarthrosis After Fracture of the Neck of the Femur. A. Schmidt.—p. 305.
Peristalsis of the Renal Pelvis in Man. A. Schmidt.—p. 325.
*Spinal Cord Compression from Vascular Changes in Meninges. O. Ritter. —p. 339.
*Pathologic Observations on the Same. A. Schmincke.—p. 353.
Papillary Neoplasms of the Biliary Tract. R. Sommer.—p. 357.
The Direction for the Screw in Fracture of the Neck of the Femur. S. Ostrowski.—p. 368.
Polypous Tumors of the Gallbladder. E. Risak.—p. 382.

Myositis Ossificans Neurotica and Lime Metastases in the Kidneys.—A healthy man, aged 20, sustained a compression fracture of the eleventh thoracic vertebra with concussion of the spinal cord at the level of the first to the third lumbar segment. Paraplegia of the lower extremities and paralysis of the bladder and rectum resulted. From three to six months later, bone, of coarsely reticular structure, formed symmetrically in the quadriceps muscles of both thighs. About ten months after the accident there were lime deposits in both kidneys. The latter phenomenon Meyer connects with the ossification in the muscle, finding confirmation in the fact that the blood calcium was increased. The source of the lime in this case was undoubtedly the bones of the paralyzed lower extremities. The atrophying bone yielded its calcium to the lymph (note the localization of the muscle ossification under the inguinal glands), and arrived thence in the blood stream. It is Meyer's opinion that the nervous system was without direct influence on the processes of bone atrophy or of pathologic calcification and ossification. He discusses the literature on the subject.

Hematogenous Infections from Furuncles.—Kauffmann describes a number of cases from Küttner's clinic. He points out that the extent of the original lesion (carbuncle or multiple furuncles in 75 per cent), but not the virulence of the micro-organism or the treatment (whether conservative or surgical) applied to the primary infection, seems to influence the question of metastasis. In immature persons the secondary infection is most likely to take place in the bones; in adults, in the soft parts. Of the internal organs the kidney, of the soft parts the gluteal musculature is most liable to be affected. Metastasis by way of the lymph stream is rare; one case is described.

Vascular Changes in the Spinal Meninges.—Ritter reviews the literature on circumscribed angiomas and varicose dilatation of the veins of the spinal arachnoid and pia and describes two new cases of the latter. Only once has the diagnosis been made before operation. The fluctuation of the nervous symptoms, accounted for by variation in the fulness of the vessels of the pia and cord, is characteristic. Early symptoms are paresthesia, accompanied in some cases by nerve root pains, weakness in the extremities and disturbances of bladder function. Motor paralyses and disturbances of sensation come later. Operation is indicated because of the

uncertainty of the diagnosis, but the prospects are not very hopeful in cases of varicosity. One of his patients was improved, but died four and a half years later, probably from the cord lesion. If the vascular changes are extramedullary, ligation may help; if in the cord, it is contraindicated. Schmincke's pathologic report on one of the cases described follows.

Deutsche medizinische Wochenschrift, Berlin

53: 219-264 (Feb. 4) 1927

Fattening with Insulin. E. Frank.—p. 219.
Sulphur in Diabetes. E. Bürgi.—p. 222.
*Kidney Insufficiency in Chronic Urinary Stasis. H. Boeminghaus.—p. 222.
Late Stages of Encephalitis. H. Delbrück.—p. 225.
Undernutrition and Infection. R. Bieling.—p. 228. C'cn.
Diseases of the Gallbladder. J. Schwartz.—p. 230.
Tests for Insufficiency of the Liver. H. Jacoby.—p. 232.
*Arsenic Habit. T. Kuroda.—p. 233.
Gastric Secretion in Anesthesia. A. Elkeles.—p. 234.
*Transplantation of Testis. H. F. O. Haberland.—p. 234.
Acetylene Anesthesia. H. Schmidt.—p. 236.
Drainage in Peritonitis. H. Hans.—p. 238.
*Tubercle Bacilli in Pneumothorax Exudates. O. Ornstein.—p. 239.
A Protein Derivative from the Skin. E. Jena and Haupt.—p. 240.
Plant Extracts for Baths. Treibmann.—p. 240.
Social Insurance for the Middle Classes. Lehner.—p. 241.
The Medical Faculty at Shanghai-Wusung. E. Birt.—p. 242.
Lick's Opinion on Physicians. Goldscheider.—p. 244.

Kidney Insufficiency in Chronic Urinary Stasis.—Boeminghaus discusses chiefly two causes of death in patients with chronic retention of urine. These patients—usually with hypertrophy of the prostate of long standing—apparently die sooner under treatment than without it, even if the treatment consists only in a permanent catheterization. Some die in the first days—as a rule from failure of the blood circulation. The anuria is here only a sign if insufficiency of the heart. Injections of epinephrine and dextrose are helpful. In another group the diuresis improves, but the residual nitrogen of the blood increases. These die of true uremia.

Arsenic Habit.—Kuroda found that a dog that was fed with increasing doses of arsenic, developed tolerance to copper sulphate. This observation on the nonspecificity of acquired arsenic tolerance is similar to the results of Cloetta's experiment on the resistance of such dogs to tartar emetic.

Transplantation of Testis.—Haberland concludes that the transplanted testis invariably dies, regardless of the technic. Successful transplantations of testes from chimpanzees to man are biologically impossible. The resorbed hormones, however, may act for some time—perhaps up to seven months.

Tubercle Bacilli in Pneumothorax Exudates.—Ornstein found tubercle bacilli in thirty-two (13 per cent) of 247 pleuritic exudates. Fifty-three of the total number were obtained from patients with therapeutic pneumothorax. Thirteen of these contained tubercle bacilli (25 per cent).

Klinische Wochenschrift, Berlin

6: 241-288 (Feb. 5) 1927

Pathogenesis and Treatment of Anuria. P. Jungmann.—p. 241.
*Leukemias After Reducing. H. Curschmann.—p. 245.
*Hormone of Anterior Lobe of Pituitary. B. Zondek and S. Aschheim.—p. 248.
Metabolism of Cancer Cells and Leukocytes. A. Bakker.—p. 252.
Meinicke Turbidity Test and Microtest. M. Stern and T. Frank.—p. 254.
Pathogenesis and Prognosis of Hypertension. N. Tolubejewa.—p. 256.
Hydatid Fluid. G. Hosemann.—p. 259.
Complement Fixation with Active Serums. I. Berger.—p. 260.
Ultraviolet Ray or Vitamin C? K. Huldschinsky.—p. 260.
Rhythmic Contraction of Arteries and the Sympathetic. H. Lewin and E. Schilf.—p. 261.
Action of Insulin on the Stomach. A. M. Predtetschensky et al.—p. 261.
Fissure of Rib from Coughing. H. Schoenemann.—p. 262.
Congenital Syphilis. A. Buschke and M. Gumpert.—p. 263.
Sex and Mortality. H. Silbergleit.—p. 268.
Orthopedic Treatment of Pulsions in Parkinsonism. S. Weil.—p. 286.

Leukemias After Reducing.—Curschmann reports four cases of leukemia which followed a reducing treatment. Thyroid extract had been used in three, diet alone in the fourth.

Hormone of Anterior Lobe of Pituitary.—Zondek and Aschheim found that implantation of the anterior lobe of the pituitary or injection of its extract caused marked enlargement of the follicles of the ovary of young mice (6 to 8 Gm. in weight) and subsequent estrus. They regard the hormone of the anterior lobe of the pituitary as superposed to the function of the ovary. It does not act in a castrated animal.

Medizinische Klinik, Berlin

23: 117-154 (Jan. 28) 1927

Action of Synthalin. H. Strauss.—p. 117.
Gastroduodenitis and Ulcers. G. Hauser.—p. 120. C'td.
*Surgery of Bilateral Tuberculosis. M. Borchardt et al.—p. 123.
Dermographism in Mineral Baths. M. Löwy.—p. 124.
*Treatment of Acute Encephalitis. B. Glesinger.—p. 127.
Iodized Oil and the Internal Organs. M. R. Castex.—p. 129.
Diagnosis of Activity. E. Szász.—p. 132.
Xanthoprotein Test in Nephritis. G. Scherk.—p. 133.
Examination of School Children. P. Karger.—p. 136.
Practical Obstetrics. H. Kritzler-Kosch.—p. 138.
Expert Testimony. Von Schnizer.—p. 140.
Problems of Scarlet Fever. B. de Rudder.—p. 141.
Obstetrics 100 Years Ago. Kupferberg.—p. 152.
Treatment of Tuberculosis of the Eyes. H. Davids. Supplement.—pp. 1-32.

Surgery of Bilateral Tuberculosis.—In bilateral tuberculosis Borchardt, Dünner and Mecklenburg institute pneumothorax on one side and perform exeresis of the phrenic nerve on the other. The latter intervention is preferable on the side with greater tendency to cirrhosis or with lesions in the lower lobe. Cavities require pneumothorax. Four of their eight patients thus treated died, four improved.

Treatment of Encephalitis.—Glesinger recommends, in acute encephalitis, daily intravenous injections of a solution containing 8 Gm. of methenamine. He has the impression that the results may be further improved by a combination of this treatment with intravenous injections of neoarsphenamine and cautious protein treatment.

23: 155-194 (Feb. 4) 1927

*Carotid Sinus Reflexes. H. E. Hering.—p. 155.
Immunization by Mouth. E. Fränkel.—p. 157.
*Gastroduodenitis and Ulcers. G. Hauser.—p. 159. C'cn.
Aneurysma Dissecans. H. Dorendorf.—p. 161.
Eclampsia Without Convulsions. P. Caffier.—p. 162.
Anterior Mediastinum in Shrinking Processes in the Thorax. A. Kirch.—p. 165.
Pathology of Trichinosis. F. Pavlica.—p. 167. C'td.
Pathogenesis of Endogenous Psychoses. E. Rubensohn.—p. 169.
Calf Spleen for Preparation of Culture Mediums. F. Berger.—p. 171.
Bilirubin. Kirković and R. Russew.—p. 172.
Injuries from Athletics. W. Baetzner.—p. 173.
Practical Obstetrics. H. Kritzler-Kosch.—p. 176.
Survey of Surgery. Kroll.—p. 179.
Ophthalmology. C. Adam.—p. 182.

Carotid Sinus Reflexes.—Hering discusses the question whether hypertension could not be due to an absence of the depressor reflexes of the carotids and aorta.

Gastroduodenitis and Ulcers.—Hauser criticizes Konjetzny's opinions. He believes that ulcers are not due to gastritis or duodenitis.

Monatsschrift für Kinderheilkunde, Leipzig

35: 1-96 (Jan.) 1927

Skin Diseases and Infections in Childhood. C. Leiner.—p. 1.
Periarteritis Nodosa. F. Basch.—p. 26.
*Influenzal Sepsis in Infants. L. Buchholz.—p. 31.
*Therapeutic Results with Strontium Salts in Tetany in Infants. O. Tezner.—p. 37.
Urinary Carbon in Infants. S. Ederer.—p. 50 and p. 57.

Influenzal Sepsis in Infants.—In five infants who died with the clinical symptoms of sepsis, Buchholz was able to cultivate influenza bacilli (Pfeiffer) in pure cultures both from material obtained by puncture of the heart and from the blood stream. The clinical picture of influenzal sepsis in infants is characterized by sudden onset during complete health, rapid course and fatal result. Meningitis is a frequent complication.

Therapeutic Experiments with Strontium Salts in Tetany in Infants.—Tezner administered strontium salts to spasmophilic infants. The galvanic values increased in almost every case. The mechanic hyperexcitability was favorably influenced in seven of ten cases. Eclamptic convulsions rapidly disappeared. The calcium content of the blood increased.

In some cases reactions occurred characterized by loss of as much as 250 Gm. in weight, produced chiefly by vomiting. The author believes that the therapeutic effect was owing to the strontium ion.

Münchener medizinische Wochenschrift, Munich

74: 223-264 (Feb. 11) 1927

Epidemiology of Scarlet Fever. B. de Rudder.—p. 223.
Roentgen-Ray Castration. P. Feldweg.—p. 228.
*Ileus and Intestinal Micro-Organisms. W. Buchholz and H. Lange.—p. 233.
Bacteriology of Typhoid-Dysentery Group. K. Schlirf.—p. 234.
Tonus of Cerebral Blood Vessels After Injuries. O. Muck.—p. 236.
Permanent Duodenal Drainage in Nutritional Disturbances. C. Funck.—p. 237.
Foreign Serums in Treatment of Tuberculosis. J. Oeder.—p. 240.
Treatment with the Patient's Own Pus. A. Levinson.—p. 241.
Treatment of Cancer. A. Theilhaber.—p. 242.
Tests with Retroplacental Blood. Hackemann.—p. 242.
Hot Air in Treatment of Cervical Gonorrhea. E. F. Immel.—p. 243.

Ileus and Intestinal Micro-Organisms.—Buchholz and Lange inhibited the growth of bacteria in an occluded intestinal loop by acriflavine. In spite of this, the clinical manifestations of ileus were the same as in animals whose intestines contained the usual germs. They conclude that death in ileus cannot be due to poisoning by bacterial toxins.

Wiener klinische Wochenschrift, Vienna

40: 181-212 (Feb. 10) 1927

Central Nervous System in Infectious Diseases. H. Dürck.—p. 181.
*Pneumopyelography. M. Burger and F. Fuchs.—p. 183.
Etiology of Postvaccinal Encephalitis. R. Kraus.—p. 185.
*Whooping Cough in Pregnancy. K. Goldschmied.—p. 186.
*Emetine in Ulcerous Colitis. H. Schur.—p. 188.
*Mechanical Idiosyncrasy? E. Urbach and M. Steiner.—p. 188.
Results of Sedimentation Test in Internal Medicine. R. Ginsburg.—p. 189.
Calmette's Tuberculosis Vaccination. H. Schroetter.—p. 194. C'cn.
Treatment of Influenza. M. Weinberger.—p. 195.
Substitutes for Irradiation of Ovaries. P. Werner.—p. 197.
Treatment of Tuberculosis in Children. H. Koch. Supplement.—pp. 1-8.

Pneumopyelography.—Burger and Fuchs confirm the experiments of Lewin and Goldschmidt and others, which had shown that gas insufflated into the ureter may penetrate into the veins. This accident occurs suddenly from rupture of the pelvis of the kidney in the region where the minor calices are inserted into the papillae of the kidney. Because of the sudden penetration of a large mass of gas, the use of oxygen for insufflation may also cause fatal embolism, although the danger is not so great as with the use of air. The rupture occurred in their experiments at a pressure of from 60 to 115 mm. of mercury—measured outside. They regard the method as more dangerous than filling the kidney pelvis with contrast solutions.

Whooping Cough in Pregnancy.—Goldschmied reports a case of whooping cough in a pregnant woman. The spontaneous delivery occurred ten days from the onset (twenty days before term). The infant was immediately separated from the mother and fed for four weeks with milk expressed from her breast. After this she suckled him while keeping a mask over her face. The child did not become infected.

Emetine in Ulcerous Colitis.—Schur had good results with emetine hydrochloride in patients with ulcerous colitis. He injected 0.02 Gm. three times daily. Besides this, daily enemas and rest in bed were ordered.

Mechanical Idiosyncrasy?—The idiosyncrasy in Urbach and Steiner's patient was apparently caused exclusively by mechanical irritation by the trichomas of barley. He did not react to various extracts of the grain.

Zeitschrift für Kinderheilkunde, Berlin

43: 1-192 (Feb. 14) 1927

Psychic Infantilism. T. Gött.—p. 1.
Irradiated Food. A. Hottinger.—p. 8.
Inability to Work in Adolescent Girls. T. Bettelheim-Stein and E. Lazar.—p. 24.
Thyroid Treatment of Hypothyroidism. W. Kornfeld and E. Nobel.—p. 65.
Diameter of Erythrocytes in Children. L. Paschert.—p. 84.
*Periodic Pathothermia. H. Vollmer.—p. 88.
Meinicke Reaction. P. Dohnal.—p. 103.
*Alimentary Fever and Toxicosis of Infants. H. Rietschel and F. Strieck.—p. 106.
Leukocytes in Pneumonia in Children. E. Stettner.—p. 122.
Fatal Cases of Epidermolysis Bullosa. E. Jenny.—p. 138.
Return of Fever in Measles. A. F. Hecht.—p. 149.
Action of Fetal Thyroid. E. Maurer.—p. 163.
Cerebellar Ataxia and Cortical Blindness. E. Redlich.—p. 175.
Measles Encephalitis. F. Redlich.—p. 178.
Perforation of Ulcer of Esophagus. S. Roszak.—p. 181.
Recovery from Tuberculosis. H. Koch.—p. 185.
Melaena Neonatorum with Ulcer. R. Steinert.—p. 188.

Periodic Pathothermia.—Vollmer observed in an infant periods of hyperthermia (42 C.), occurring at intervals of about four weeks and associated with loss of weight. After a few days the weight and temperature returned to the previous levels. Later on the child had attacks of low temperature at night. He believes that a disturbance of the pituitary gland was responsible for these phenomena. The temperature of the patient's sister (aged 3 years) was also inconstant, varying between 36 C. and 38 C. without apparent cause. The blood picture was normal in both children during the periods of high temperature.

Alimentary Fever and Toxicosis of Infants.—Rietschel and Strieck observed a considerable increase in the metabolism (over 60 per cent) in adults after oral administration of 10 Gm. of sodium chloride in 20 cc. of water. The action was still more pronounced in infants. Simultaneous administration of a sufficient amount of water counteracts the effect of the salt. They are convinced that the toxicosis of infants is only a manifestation of thirst.

Zentralblatt für innere Medizin, Leipzig

48: 169-200 (Feb. 12) 1927

*Surgery of Nephritis. M. Kappis.—p. 169.

Surgery of Nephritis.—Kappis finds that the question of surgical treatment of chronic nephritis is as yet undecided. Nothing can be expected from surgery in "contented" kidneys. The results of decapsulation are good in nephralgia and in repeated hemorrhagic nephritis. Acute anuria is another indication for surgical intervention, which should not be delayed for more than two or at the utmost three days. Decapsulation might be tried in acute glomerulonephritis that does not show a definite tendency to heal in two or three months. Anuria in various poisonings sometimes yields to surgical intervention. At any rate, not much can be lost in such cases.

Russkaya Klinika, Moscow

6: 609-759 (Nov.) 1926. Partial Index

*Tissue Eosinophilia in Tumors. V. V. Alyakritskiy.—p. 609.
Familial Monilethrix. V. A. Rakhmanoff.—p. 642.
*Effect of Mineral Water on Gastric Achylia. S. V. Krestnikova.—p. 683.
Uric Acid in the Blood in Gynecologic Diseases. F. I. Rossinskiy.—p. 701.

Tissue Eosinophilia in Case of Tumor.—Alyakritskiy's research was made on 214 nonmalignant tumors, sarcomas and cancers. A notable eosinophilia is frequent in cancer tissue; it is much rarer in sarcoma tissue. Eosinophilia is absent in nonmalignant tumors, except polypi and certain neoplasms of the skin. It is most frequent in scirrhous carcinoma and adenocarcinoma. Cancers of the skin and mucous membranes are most strongly eosinophile; the slightest eosinophilia was found in cancer of the mammary gland. Tissue eosinophilia depends on the amount of disintegrated tissues, their resorption and their chemical properties.

Influence of Mineral Water on Gastric Achylia.—Krestnikova studied the action of Essentuki mineral water on thirty-two patients with gastric achylia. The water is alkaline, and contains sodium chloride. The patients were under treatment for from four to six weeks. Elimination of free hydrochloric acid served as an indication of the activity of the gastric cells. Good results were obtained in cases of functional achylia and "pseudo-achylia." The mineral water treatment proved to be without effect in advanced gastritis and in most cases of organic achylia. The condition was sometimes aggravated, since a compensated achylia became a decompensated one.